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# The Specialist in Electronic Component Distribution

## Line Card





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## Why Choose TTI?

### Why Buy from TTI?

Founded in 1971, TTI has steadily grown to become a world leading specialist distributor of electronic components. The company was founded on the premise that passive component purchasing could be made more efficient by offering product specialisation, customer-driven service and proprietary supply chain solutions.

### Product Knowledgeable Experts

Our unique specialisation enables us to provide significantly better product knowledge to support manufacturing from design chain to supply chain. TTI's commitment to this specialty and our customers is as dedicated today as always.

### Broader and Deeper Inventories

TTI maintains extensive inventories, stocking more than 2M part numbers globally - that's more connector, passive, electromechanical, discrete, sensor and power supply inventory available than from any other source.

### Leading Edge Technology Products

TTI partners with manufacturers that lead the industry in new component technologies and can help solve any design challenge. We ensure the very latest and most technologically-advanced products are readily available from stock.

### Supply Chain Excellence

From technical application advice to customised logistical solutions; TTI can add value throughout the supply chain by reducing acquisition costs, improving material flow through forecast analysis, provide safety stock and reduce receipt handling through consolidated shipments. We provide the BOM coverage necessary to deploy comprehensive supply chain solutions that reduce total cost of ownership and mitigate line down risk.

### Global Distribution Centres

Our European headquarters is located just outside of Munich, Germany in Maisach-Germlinden. In total, we have more than 35,000m<sup>2</sup> of dedicated warehouse space and local sales and technical support in over 40 locations across Europe.

TTI has more than 120,000m<sup>2</sup> of automated warehousing in North America, Europe and Asia. All are linked into a global warehouse management system that provides superior customer service and overall business efficiencies. Wherever you are in the world, TTI can support you.

### Quality and Reliability

TTI is the first distributor to have all global warehouse locations ISO registered and certified to ISO 9001 and ISO 14001 Standards. TTI Europe is also certified to EN9120/EN9100, IECQ-CECC and ISO/IEC 27001 Standards. Additionally, all of our European sales branches are ISO 9001 certified. TTI has one global documentation system that ensures that every TTI branch and warehouse in the world follows the same processes.

Year after year, customers rate our inventory availability, on-time delivery and accuracy among the very best in the industry - contact us today to find out what a true specialist has to offer.





**Global Distribution Centres** with more than **120,000m<sup>2</sup>** of automated warehousing in North America, Europe and Asia.





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# The Specialist in Electronic Component Distribution

## 3M

### A

**ALPS**  
**Amphenol**  
 Advanced Sensors  
 Aerospace  
 AFCI Electronics  
 AirLB  
 Alden  
 Amphenol Limited  
 Audio  
 Canada  
 Connex  
 Fahrzeugelektrik Pirna (FEP)  
 Fiber Optics  
 Industrial  
 LTW  
 Martec  
 Matrix  
 Nexus  
 PCD  
 RF  
 Sine  
 Socapex  
 Spectra Strip  
 SV Microwave  
 Teradyne Connection (TCS)  
 Tachel

### APEM

**API Delevan**  
**API Technologies**

Spectrum Control

### APTIV

FCI Automotive  
 HellermannTyton

### Artesyn

### ATC

### AVX

Elco

### B

### Bourns

Komatsulite

### C

**C&K Components**  
**Carlisle Interconnect Technologies**

Tri-Star

### CTS

Tusonix

### CDE (Cornell Dubilier)

Illinois Capacitor

### E

### EATON

Cooper Bussmann

Coiltronics

PowerStor

### EBM Papst\*

**Esterline Connection Technologies**

Souriau

Sunbank

### F

### Flex Power Modules

### G

**GE Embedded Power**  
**Glenair**

### H

**HARTING\***  
**Harwin**  
**Honeywell**

### I

**IDEC**  
**ITT Cannon**

### J

**JAE**  
**JST**

### K

### KEMET

Arcotronics

Evov Rifa

NEC TOKIN

### Kingbright

### Knowles Precision Devices

Syfer

DLI

Novacap

Voltronics

### KOA

### KYOCERA

### L

**Lelon**  
**Littelfuse**

Hamlin

Littelfuse Automotive

Raychem

Teccor

TE Connectivity Circuit Protection

U.S. Sensor

### M

**MEAN WELL**  
**Molex**

Brad\*

FCT

Flamar\*

GWconnect™

mPm®

Woodhead

### Murata

Murata Power Solutions

TOKO

### N

### Nexans

Filotex

### Nichicon

### O

### OHMITE

Arcol

### Omron Electronic Components

### P

### Panasonic Automotive & Industrial Devices

### Panasonic Electric Works

### Panduit

### Phoenix Contact

### PKC Group

### PRECI-DIP

### Pulse Electronics

### R

### Radiall

### S

### Samsung

### Samtec

### Schaffner\*

### Schurter\*

### Sensata

Airpax

BEI Sensors

Crydom

Kavlico

Klixon

Sensor Nite

### Smiths Interconnect

Hypertac

IDI

Sabritec

### Standex-Meder

### T

### TDK

EPCOS

### TE Connectivity

Agastat

Alcoswitch

Amp

Amp Netconnect

Augat

Axicom

CII Technologies

Corcom

DEUTSCH

ELCON

HARTMAN

HTS

KILOVAC

MADISON CABLE

Measurement Specialties Inc (MSI)

MICRODOT

NANONICS

OEG

Polamco

Potter & Brumfield

Rochester Cables

SCHRACK

SEACON

### Toshiba

### TT Electronics

AB Elektronik

BI Technologies

IRC

Optek

Semelab

Welwyn

### V

### Vishay

Angstrohm

BCcomponents

Beyschlag

Cera-Mite

Dale

Draloric

Electro-Films

Huntington/Milwaukee

MCB

Roederstein

Semiconductors

Sfernice

Siliconix

Spectrol

Sprague

Techno

Thin Film

Vitramon

### Vishay Precision Group

### Vitrohm

### W

### WIMA

### Weidmüller

### Y

### Yageo

Phycomp





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# Broadest and Deepest Inventory





# Connectors

Connectors

## Automotive & Transportation Connectors

| 3M | Amphenol | Aptiv | AVX | Harwin | HellermannTyton | ITT Cannon | JAE | JST | KYOCERA | Molex | Panduit | Phoenix Contact | PKC Group | Radiall | Smiths Interconnect | Souriau | TE Connectivity | Weidmüller |
|----|----------|-------|-----|--------|-----------------|------------|-----|-----|---------|-------|---------|-----------------|-----------|---------|---------------------|---------|-----------------|------------|
|----|----------|-------|-----|--------|-----------------|------------|-----|-----|---------|-------|---------|-----------------|-----------|---------|---------------------|---------|-----------------|------------|

### ISO – Agricultural Connectors

|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Board-to-Board                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Circular - Metal                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Circular - Sealed                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Circular - Unsealed                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contacts                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EV / HEV - High Power                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EV/HEV - 48V Connectors                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EV/HEV - Charging Couplers                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fibre Optic Products                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FFC / FPC Connectors                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fuse / Lamp Holders                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Input / Output                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ISO - Agricultural / Trailer Connectors   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Multimedia / Convenience Port             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Memory Card                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Modular Blocks                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rail - High Reliability Power             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rail - Signal Connectors                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Relay Holders                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RF - Coax / Microwave                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RF - FAKRA / HSD                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rectangular - Heavy-Duty                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rectangular - Sealed                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rectangular - Unsealed                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Automotive Sensor Interconnects           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Solderless Terminals                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Terminal Blocks                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tooling                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wire & Cable                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wire Management – Fixing & Identification |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wire-to-Board                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wire-to-Wire                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### By Market Segment

|                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Agriculture                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Automotive                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction & Mining      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Vehicles        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Electric / Hybrid Vehicles |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Marine                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Military / Aerospace       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rail / Mass Transit        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Recreational Vehicles      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Backplane, Board-To-Board & Device-To-Board

| 3M | Amphenol | AVX | Harwin | ITT Cannon | JAE | JST | KYOCERA | Molex | Preci-Dip | Radiall | Smiths Interconnect | Souriau | TE Connectivity |
|----|----------|-----|--------|------------|-----|-----|---------|-------|-----------|---------|---------------------|---------|-----------------|
|----|----------|-----|--------|------------|-----|-----|---------|-------|-----------|---------|---------------------|---------|-----------------|

### Backplane

|                        |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 10 Gb / s+ Solutions   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.00mm                 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Assemblies (Backplane) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ATCA / MicroTCA        |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable Assemblies       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Card Edge              |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Compact PCI            |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DIN 41612 (Eurocard)   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fibre Optic            |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Future Bus             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hard Metric            |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PCI Express            |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Power                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RF / Ganged RF         |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SCA-2                  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### Board-To-Board

|                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ball Grid Array (BGA) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Battery Connectors    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Board Stacking        |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Breakaway Headers     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Compression           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Headers & Receptacles |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mezzanine / FPC       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Power                 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SCSI                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Shunts                |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stacking              |  |  |  |  |  |  |  |  |  |  |  |  |  |

### Device-To-Board

|                        |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DIMM                   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DIP                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PCMCIA                 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PGA                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PLCC                   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RIMM / DIMM / SIMM     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SIP                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SO DIMM & RIMM         |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Test / Burn-In Sockets |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transistor             |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Connectors

## Cable & Wire Management

|                                     | 3M | AVX | Amphenol | HellermannTyton | JAE | JST | KYOCERA | Molex | Nexans | Panduit | Phoenix Contact | Radiall | Smiths Interconnect | Souriau | TE Connectivity | Weidmüller |
|-------------------------------------|----|-----|----------|-----------------|-----|-----|---------|-------|--------|---------|-----------------|---------|---------------------|---------|-----------------|------------|
| <b>Cable &amp; Wire</b>             |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Cable Assemblies                    |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Coaxial (RF)                        |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| EV / HEV - High Power               |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Fiber Optic                         |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Flat Flex (FFC, FPC)                |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Flat Ribbon                         |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Modular - Flat                      |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Multiple Conductor                  |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Single Conductor (Wire)             |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| <b>Cable &amp; Wire Management</b>  |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Accessories                         |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Bushings, Grommets                  |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Cable and Cord Grips                |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Cable Braids                        |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Cable Ties                          |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Clamps and Clips                    |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Cold Shrink Tape, Tubing            |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Heat Shrink Boots and Tubing        |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Identification - Labels and Markers |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Solid Tubing and Sleeving           |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Spiral Wrap and Expandable Sleeving |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |
| Splice Enclosures and Protection    |    |     |          |                 |     |     |         |       |        |         |                 |         |                     |         |                 |            |

## Input/Output

|                                | 3M | Amphenol | API (Spectrum Control) | Aptiv | AVX | Carlisle / Tri-Star | Glennair | ITT Cannon | Harwin | JAE | JST | Molex | Phoenix Contact | Pulse | Radiall | Smiths Interconnect | Souriau | TE Connectivity | Weidmüller |  |
|--------------------------------|----|----------|------------------------|-------|-----|---------------------|----------|------------|--------|-----|-----|-------|-----------------|-------|---------|---------------------|---------|-----------------|------------|--|
| <b>1394 &amp; 1394b</b>        |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Audio                          |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Audio ¼" Phone                 |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Audio 3.5mm PCB                |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Audio BNC 75ohm                |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Audio XLR                      |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Audio MP Multipin              |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Camera Link / Mini Camera Link |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Circular                       |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Combo I / O                    |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Display Port                   |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| D-Subminiature                 |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| DVI                            |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Fiber Channel                  |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Fiber Optic                    |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Filtered I / O                 |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| HDMI / Micro HDMI              |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Ipass (Mini SAS)               |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| InfiniBand®                    |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| M12 / M12D / M8                |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Micro D                        |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Mini DIN / Circular DIN        |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Mini D-Subminiature            |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Mobile Systems                 |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Modular Plugs & Jacks          |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| PCI Express                    |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Power                          |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Push / Pull                    |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| Rectangular                    |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| RF / Coax / Microwave          |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| RJ / Industrial Ethernet       |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| SATA / SAS / Mini SATA         |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| SCSI                           |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| SFP / XFP                      |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| TDP                            |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |
| USB / Mini USB / USB OTG       |    |          |                        |       |     |                     |          |            |        |     |     |       |                 |       |         |                     |         |                 |            |  |

## Memory Card Connectors

|                               | 3M | Amphenol | AVX | C&K Components | JAE | JST | KYOCERA | Molex | Panasonic | TE Connectivity |
|-------------------------------|----|----------|-----|----------------|-----|-----|---------|-------|-----------|-----------------|
| <b>CompactFlash™</b>          |    |          |     |                |     |     |         |       |           |                 |
| DDR / DDR2 / Mini DDR2 / DDR3 |    |          |     |                |     |     |         |       |           |                 |
| Express Card                  |    |          |     |                |     |     |         |       |           |                 |
| Memory Stick / Duo            |    |          |     |                |     |     |         |       |           |                 |
| Micro SD                      |    |          |     |                |     |     |         |       |           |                 |
| Mini SD                       |    |          |     |                |     |     |         |       |           |                 |
| MMC                           |    |          |     |                |     |     |         |       |           |                 |
| PC Card / CardBus             |    |          |     |                |     |     |         |       |           |                 |
| PCMCIA                        |    |          |     |                |     |     |         |       |           |                 |
| SD (Secure Digital)           |    |          |     |                |     |     |         |       |           |                 |
| Smart Card (SIM)              |    |          |     |                |     |     |         |       |           |                 |
| xD                            |    |          |     |                |     |     |         |       |           |                 |

## Military & Avionic Specifications

|                                   | Amphenol | Glennair | ITT Cannon | Smiths Interconnect | Souriau | TE Connectivity |
|-----------------------------------|----------|----------|------------|---------------------|---------|-----------------|
| <b>EN2997 / ESC</b>               |          |          |            |                     |         |                 |
| EN3645                            |          |          |            |                     |         |                 |
| EN4165                            |          |          |            |                     |         |                 |
| HE301                             |          |          |            |                     |         |                 |
| HE308                             |          |          |            |                     |         |                 |
| MIL - 22992                       |          |          |            |                     |         |                 |
| MIL - DTL - 26482 Series 1 Crimp  |          |          |            |                     |         |                 |
| MIL - DTL - 26482 Series 1 Solder |          |          |            |                     |         |                 |
| MIL - DTL - 26482 Series 2        |          |          |            |                     |         |                 |
| MIL - DTL - 27599 Solder          |          |          |            |                     |         |                 |
| MIL - DTL - 28840 Shipboard       |          |          |            |                     |         |                 |
| MIL - DTL - 38999 Series I & II   |          |          |            |                     |         |                 |
| MIL - DTL - 38999 Series III      |          |          |            |                     |         |                 |
| AS50151                           |          |          |            |                     |         |                 |
| MIL - DTL - 55302                 |          |          |            |                     |         |                 |
| MIL - C - 81511                   |          |          |            |                     |         |                 |
| MIL - DTL - 83723                 |          |          |            |                     |         |                 |
| <b>Hermetics</b>                  |          |          |            |                     |         |                 |
| VG95234                           |          |          |            |                     |         |                 |
| VG95328                           |          |          |            |                     |         |                 |
| VG96912                           |          |          |            |                     |         |                 |
| VG96929                           |          |          |            |                     |         |                 |

## Military Connectors & Accessories

|                                     | Amphenol | Carlisle / Tri-Star | Glennair | HellermannTyton | ITT Cannon | Molex | Panduit | Preci-Dip | Radiall | Smiths Interconnect | Souriau | TE Connectivity |
|-------------------------------------|----------|---------------------|----------|-----------------|------------|-------|---------|-----------|---------|---------------------|---------|-----------------|
| <b>Backshells &amp; Accessories</b> |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Coax / RF                           |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| <b>Contacts</b>                     |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| D-Subminiature                      |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Discrete Sockets                    |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Filtered Audio Connector            |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Micro D                             |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Rack & Panel                        |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Sealed Plugs                        |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Microwave                           |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Terminal Blocks                     |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Terminals                           |          |                     |          |                 |            |       |         |           |         |                     |         |                 |
| Tools                               |          |                     |          |                 |            |       |         |           |         |                     |         |                 |



# Connectors

Connectors

| RF/Coaxial/Microwave           | 3M | Amphenol | Carlisle / Tri-Star | ITT Cannon | JAE | JST | Molex | Radiall | Smiths Interconnect | Souriau | TE Connectivity |
|--------------------------------|----|----------|---------------------|------------|-----|-----|-------|---------|---------------------|---------|-----------------|
| 1.0 / 2.3                      |    |          |                     |            |     |     |       |         |                     |         |                 |
| 1.6 / 5.6                      |    |          |                     |            |     |     |       |         |                     |         |                 |
| 7 / 16                         |    |          |                     |            |     |     |       |         |                     |         |                 |
| BMA                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| BNC (50 / 75Ω)                 |    |          |                     |            |     |     |       |         |                     |         |                 |
| BNC (Miniature)                |    |          |                     |            |     |     |       |         |                     |         |                 |
| B to B Blindmate / Compression |    |          |                     |            |     |     |       |         |                     |         |                 |
| BSA                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| FAKRA                          |    |          |                     |            |     |     |       |         |                     |         |                 |
| MCX / MMCX                     |    |          |                     |            |     |     |       |         |                     |         |                 |
| MHV / SHV                      |    |          |                     |            |     |     |       |         |                     |         |                 |
| Precision1                     |    |          |                     |            |     |     |       |         |                     |         |                 |
| QMA                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| Reverse Polarity2              |    |          |                     |            |     |     |       |         |                     |         |                 |
| Shielded Terminators           |    |          |                     |            |     |     |       |         |                     |         |                 |
| SMA                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| SMB (50 / 75Ω)                 |    |          |                     |            |     |     |       |         |                     |         |                 |
| SMB (Miniature)                |    |          |                     |            |     |     |       |         |                     |         |                 |
| SMC                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| SMP                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| SMT                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| SSMA                           |    |          |                     |            |     |     |       |         |                     |         |                 |
| TNC                            |    |          |                     |            |     |     |       |         |                     |         |                 |
| Triax                          |    |          |                     |            |     |     |       |         |                     |         |                 |
| Twinax                         |    |          |                     |            |     |     |       |         |                     |         |                 |
| Type F / G                     |    |          |                     |            |     |     |       |         |                     |         |                 |
| Type N                         |    |          |                     |            |     |     |       |         |                     |         |                 |
| UHF / MiniUHF                  |    |          |                     |            |     |     |       |         |                     |         |                 |

| Speciality Connectors  | 3M | Amphenol | API (Spectrum Control) | Aptiv | AVX | Carlisle / Tri-Star | Glenair | ITT Cannon | Harwin | HellermannTyton | JAE | JST | Molex | Phoenix Contact | Smiths Interconnect | Souriau | TE Connectivity | Weidmüller |  |
|------------------------|----|----------|------------------------|-------|-----|---------------------|---------|------------|--------|-----------------|-----|-----|-------|-----------------|---------------------|---------|-----------------|------------|--|
| Automotive             |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Battery                |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| COTS                   |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| EMI Shielded           |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Filtered               |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Harsh Environment      |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Hermetic               |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| High Voltage           |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Industrial             |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| LED Connector          |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Micro Miniature / Nano |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |
| Motor Connectors       |    |          |                        |       |     |                     |         |            |        |                 |     |     |       |                 |                     |         |                 |            |  |

| Terminal Blocks               | Amphenol | API (Spectrum Control) | Molex | Phoenix Contact | Souriau | TE Connectivity | Weidmüller |
|-------------------------------|----------|------------------------|-------|-----------------|---------|-----------------|------------|
| Barrier Strips                |          |                        |       |                 |         |                 |            |
| Europa                        |          |                        |       |                 |         |                 |            |
| Eurostyle - Fixed / Pluggable |          |                        |       |                 |         |                 |            |
| 2.54mm                        |          |                        |       |                 |         |                 |            |
| 3.50mm                        |          |                        |       |                 |         |                 |            |
| 3.81mm                        |          |                        |       |                 |         |                 |            |
| 5.00mm                        |          |                        |       |                 |         |                 |            |
| 5.08mm                        |          |                        |       |                 |         |                 |            |
| Filtered                      |          |                        |       |                 |         |                 |            |
| Interface Modules             |          |                        |       |                 |         |                 |            |
| Phenolic                      |          |                        |       |                 |         |                 |            |
| Rail Mounted                  |          |                        |       |                 |         |                 |            |
| Screw Terminal                |          |                        |       |                 |         |                 |            |
| Spring Clamp                  |          |                        |       |                 |         |                 |            |

| Wire & Board Management/ Accessories | 3M | Amphenol | AVX | Carlisle / Tri-Star | Glenair | Harwin | HellermannTyton | ITT Cannon | JAE | JST | Molex | Panduit | Phoenix Contact | Preci-Dip | Souriau | TE Connectivity | Weidmüller |
|--------------------------------------|----|----------|-----|---------------------|---------|--------|-----------------|------------|-----|-----|-------|---------|-----------------|-----------|---------|-----------------|------------|
| Backshells                           |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Clips                          |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Management                     |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Marker Ties                    |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Mounts                         |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Spacers                        |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Terminals                      |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Cable Ties                           |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Heat Shrink Products                 |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Jumper Links                         |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Labelling Systems                    |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Labels                               |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| PCB Spacers                          |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| PCB Terminals                        |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Printers / Software & Ribbons        |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| RFI Clips & Fingers                  |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Shorting Links                       |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Solderless Terminals                 |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Splices                              |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Stainless Steel Accessories          |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Test Points                          |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Tooling                              |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Wire & Cable                         |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |
| Wire Ducting                         |    |          |     |                     |         |        |                 |            |     |     |       |         |                 |           |         |                 |            |

| Wire-To-Board/ Wire-To-Wire | 3M | Amphenol | Aptiv | AVX | Glenair | Harwin | JAE | JST | KYOCERA | Molex | Phoenix Contact | Smiths Interconnect | Souriau | TE Connectivity | Weidmüller |
|-----------------------------|----|----------|-------|-----|---------|--------|-----|-----|---------|-------|-----------------|---------------------|---------|-----------------|------------|
| 1.25mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 1.27mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 2.00mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 2.50mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 2.54mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 3.00mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 3.96mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 4.00mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 4.20mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 5.00mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 5.03mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 5.08mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 6.35mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 7.50mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 9.00mm                      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| 10.00mm                     |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| Bus Bar                     |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| Cable Assemblies            |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| Discrete Wire               |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| FFC / FPC                   |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| IDC Discrete Wire           |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| IDC / Mass Termination      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| Mini D Ribbon / Champ       |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| Power                       |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| SATA / SAS / Mini SATA      |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |
| SCSI I, II, III             |    |          |       |     |         |        |     |     |         |       |                 |                     |         |                 |            |



# Electromechanical

## Relays & Circuit Breakers

|                             | IDEC | KEMET | Littelfuse | Omron | Panasonic | Radiall | Standex Meder | Sensata - Crydom | TE Connectivity |
|-----------------------------|------|-------|------------|-------|-----------|---------|---------------|------------------|-----------------|
| <b>Relays</b>               |      |       |            |       |           |         |               |                  |                 |
| Automotive                  |      |       |            |       |           |         |               |                  |                 |
| Communication               |      |       |            |       |           |         |               |                  |                 |
| Contactors                  |      |       |            |       |           |         |               |                  |                 |
| Control                     |      |       |            |       |           |         |               |                  |                 |
| Counters                    |      |       |            |       |           |         |               |                  |                 |
| Crystal Can                 |      |       |            |       |           |         |               |                  |                 |
| Definite Purpose Contactors |      |       |            |       |           |         |               |                  |                 |
| DIN Rail Mounted            |      |       |            |       |           |         |               |                  |                 |
| Force Guided Contact        |      |       |            |       |           |         |               |                  |                 |
| General Purpose             |      |       |            |       |           |         |               |                  |                 |
| High Frequency Relays       |      |       |            |       |           |         |               |                  |                 |
| High Voltage                |      |       |            |       |           |         |               |                  |                 |
| Industrial DC & AC          |      |       |            |       |           |         |               |                  |                 |
| Input / Output Modules      |      |       |            |       |           |         |               |                  |                 |
| Magnetic Latching           |      |       |            |       |           |         |               |                  |                 |
| Microwave                   |      |       |            |       |           |         |               |                  |                 |
| Military / Space            |      |       |            |       |           |         |               |                  |                 |
| Miniature PCB               |      |       |            |       |           |         |               |                  |                 |
| MOSFET                      |      |       |            |       |           |         |               |                  |                 |
| Panel/Plug-In               |      |       |            |       |           |         |               |                  |                 |
| Power                       |      |       |            |       |           |         |               |                  |                 |
| Reed                        |      |       |            |       |           |         |               |                  |                 |
| Safety                      |      |       |            |       |           |         |               |                  |                 |
| Signal                      |      |       |            |       |           |         |               |                  |                 |
| Sockets                     |      |       |            |       |           |         |               |                  |                 |
| Solid State Relays          |      |       |            |       |           |         |               |                  |                 |
| Time Delay                  |      |       |            |       |           |         |               |                  |                 |
| <b>Circuit Breakers</b>     |      |       |            |       |           |         |               |                  |                 |
| Magnetic Circuit Breakers   |      |       |            |       |           |         |               |                  |                 |
| Thermal Circuit Breakers    |      |       |            |       |           |         |               |                  |                 |

## Switches

|                                | ALPS | APEM/ IDEC | Bourns | C&K | Honeywell | Littelfuse | Omron | Panasonic | Standex Meder | TE Connectivity |
|--------------------------------|------|------------|--------|-----|-----------|------------|-------|-----------|---------------|-----------------|
| Analog                         |      |            |        |     |           |            |       |           |               |                 |
| Counters / Hour Meters         |      |            |        |     |           |            |       |           |               |                 |
| Detection                      |      |            |        |     |           |            |       |           |               |                 |
| DIP                            |      |            |        |     |           |            |       |           |               |                 |
| Emergency Stop                 |      |            |        |     |           |            |       |           |               |                 |
| Encoder                        |      |            |        |     |           |            |       |           |               |                 |
| Fader                          |      |            |        |     |           |            |       |           |               |                 |
| Industrial                     |      |            |        |     |           |            |       |           |               |                 |
| Joystick                       |      |            |        |     |           |            |       |           |               |                 |
| Keylock / Switchlock           |      |            |        |     |           |            |       |           |               |                 |
| Key Switch                     |      |            |        |     |           |            |       |           |               |                 |
| Knob Switch                    |      |            |        |     |           |            |       |           |               |                 |
| Limit                          |      |            |        |     |           |            |       |           |               |                 |
| Mil / Aero / Space Grade Level |      |            |        |     |           |            |       |           |               |                 |
| Navigation Switches            |      |            |        |     |           |            |       |           |               |                 |
| Pushbutton                     |      |            |        |     |           |            |       |           |               |                 |
| Pushwheel / Thumbwheel         |      |            |        |     |           |            |       |           |               |                 |
| Rocker                         |      |            |        |     |           |            |       |           |               |                 |
| Rotary                         |      |            |        |     |           |            |       |           |               |                 |
| Safety                         |      |            |        |     |           |            |       |           |               |                 |
| Selecter                       |      |            |        |     |           |            |       |           |               |                 |
| Slide                          |      |            |        |     |           |            |       |           |               |                 |
| Snap Action                    |      |            |        |     |           |            |       |           |               |                 |
| Special Purpose                |      |            |        |     |           |            |       |           |               |                 |
| Tactile                        |      |            |        |     |           |            |       |           |               |                 |
| Toggle / Paddle                |      |            |        |     |           |            |       |           |               |                 |
| Wireless Limit                 |      |            |        |     |           |            |       |           |               |                 |



# Passives - Resistors

Passives - Resistors

| Film             | Manufacturers |     |        |           |                 |                |                 |     |        |        |          |              |      |               |                      |              |        |           |                        |       |
|------------------|---------------|-----|--------|-----------|-----------------|----------------|-----------------|-----|--------|--------|----------|--------------|------|---------------|----------------------|--------------|--------|-----------|------------------------|-------|
|                  | Bourns        | KOA | OHMITE | Panasonic | TE Connectivity | TT Electronics | BI Technologies | IRC | Welwyn | Vishay | Angstrom | BCcomponents | Dale | Electro-Films | Huntington/Milwaukee | Sternice/MCB | Techno | Thin Film | Vishay Precision Group | Yageo |
| Chip Array       | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Discrete Chip    | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Flame Proof      | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Fusible          | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| High Rel         | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| High Temp        | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| High Voltage     | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Matched Sets     | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Melf/Cylindrical | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Metal Film       | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Metal Glaze      | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Metal Oxide      | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Precision        | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Thick Film Chip  | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Thin Film Chip   | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Trimable         | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |
| Voltage Divider  | ■             | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■        | ■            | ■    | ■             | ■                    | ■            | ■      | ■         | ■                      | ■     |

| Network            | Manufacturers |     |           |                 |                |                 |     |        |        |      |               |                      |        |           |                        |
|--------------------|---------------|-----|-----------|-----------------|----------------|-----------------|-----|--------|--------|------|---------------|----------------------|--------|-----------|------------------------|
|                    | Bourns        | KOA | Panasonic | TE Connectivity | TT Electronics | BI Technologies | IRC | Welwyn | Vishay | Dale | Electro-Films | Huntington/Milwaukee | Techno | Thin Film | Vishay Precision Group |
| Array              | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Conformal Coated   | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Custom             | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| High Rel           | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Integrated Passive | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Ladder             | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Line Protection    | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Moulded            | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Resistor/Capacitor | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| SMT                | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Surge              | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Thick Film DIP     | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Thick Film SIP     | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Thin Film DIP      | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |
| Thin Film SIP      | ■             | ■   | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■             | ■                    | ■      | ■         | ■                      |

- Lead-free only parts available
- Lead & Lead-free compliant parts available
- ▲ Lead-only compliant parts available

| Potentiometers/ Trimmers | Manufacturers |                           |     |        |        |           |                 |                          |         |        |              |      |              |          |                        |
|--------------------------|---------------|---------------------------|-----|--------|--------|-----------|-----------------|--------------------------|---------|--------|--------------|------|--------------|----------|------------------------|
|                          | Bourns        | Honeywell Knowles (Syfer) | KOA | Murata | OHMITE | Panasonic | TE Connectivity | TT Electronics (BI Tech) | Tusonix | Vishay | BCcomponents | Dale | Sternice/MCB | Spectrol | Vishay Precision Group |
| High Rel                 | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Trimming Potentiometers  | ■             |                           |     |        |        |           |                 |                          |         |        |              |      |              |          |                        |
| Adjustment Tools         | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Carbon                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Cermet                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Counters                 | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Dials / Knobs            | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Multi-Turn               | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Open Frame               | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Open Frame Slide         | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Sealed Frame             | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Single-Turn              | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Wirewound                | ▲             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Precision Panel Control  | ■             |                           |     |        |        |           |                 |                          |         |        |              |      |              |          |                        |
| Carbon                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Cermet                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Conductive Plastic       | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Knobs                    | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Hybrid                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Linear                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Metal Foil               | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Modular                  | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Motor Pot                | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Multi-Turn               | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Non-Linear               | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Rheostat                 | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Rotary                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Sealed Frame             | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Single-Turn              | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Wirewound                | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| High Rel                 | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Sensor / Encoder         | ■             |                           |     |        |        |           |                 |                          |         |        |              |      |              |          |                        |
| Attenuator               | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Encoders                 | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Linear Motion            | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |
| Rotary                   | ■             | ■                         | ■   | ■      | ■      | ■         | ■               | ■                        | ■       | ■      | ■            | ■    | ■            | ■        | ■                      |

| Power / Wirewound / Carbon & Foil | Manufacturers |     |        |     |        |           |                 |                |                 |     |        |        |      |                      |              |           |                        |       |
|-----------------------------------|---------------|-----|--------|-----|--------|-----------|-----------------|----------------|-----------------|-----|--------|--------|------|----------------------|--------------|-----------|------------------------|-------|
|                                   | ATC           | AVX | Bourns | KOA | OHMITE | Panasonic | TE Connectivity | TT Electronics | BI Technologies | IRC | Welwyn | Vishay | Dale | Huntington/Milwaukee | Sternice/Mcb | Thin Film | Vishay Precision Group | Yageo |
| High Rel                          | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Power / Wirewound                 | ■             |     |        |     |        |           |                 |                |                 |     |        |        |      |                      |              |           |                        |       |
| Brackets / Hardware               | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Ceramic Composition               | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Commercial                        | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Current Sense / Low Resistance    | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Industrial                        | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Precision                         | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Rheostat                          | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Special Purpose                   | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Tubular                           | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Vitreous Enamel                   | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Carbon                            | ■             |     |        |     |        |           |                 |                |                 |     |        |        |      |                      |              |           |                        |       |
| Carbon Composition                | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Carbon Film                       | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |
| Foil                              | ■             |     |        |     |        |           |                 |                |                 |     |        |        |      |                      |              |           |                        |       |
| Bulk Metal Foil                   | ■             | ■   | ■      | ■   | ■      | ■         | ■               | ■              | ■               | ■   | ■      | ■      | ■    | ■                    | ■            | ■         | ■                      | ■     |

# Passives - Capacitors

| Aluminium              | AVX | Cornell Dubilier | Eaton (Cooper Bussmann) | KEMET | Lelon | Murata | Nichicon | Panasonic | TDK (Epcos) | Vishay (BCcomponents) |
|------------------------|-----|------------------|-------------------------|-------|-------|--------|----------|-----------|-------------|-----------------------|
| AC Motor Start         |     |                  |                         |       |       |        |          |           |             |                       |
| Axial Electrolytic     |     | ●                |                         |       |       |        |          |           |             | ●                     |
| EDLC / Supercapacitor  | ■   |                  |                         |       |       |        |          |           |             |                       |
| FlatPack Electrolytics | ▲   |                  |                         |       |       |        |          |           |             |                       |
| High Rel               | ●   |                  | ●                       |       |       |        |          |           |             | ●                     |
| Polymer                |     |                  |                         |       |       |        |          |           |             |                       |
| Radial Miniature       | ●   |                  |                         |       |       |        |          |           |             | ●                     |
| Screw Terminal         |     |                  |                         |       |       |        |          |           |             |                       |
| Snap-In                | ■   |                  |                         |       |       |        |          |           |             |                       |
| Surface Mount          | ■   |                  |                         |       |       |        |          |           |             |                       |

| Ceramic          | API Technologies | AVX | ATC | Cornell Dubilier | KEMET | Knowles (Sfer) | Murata | Samsung | TDK | Tusonix | Vishay | BCcomponents | Ceramate | Vitramon | Yageo |
|------------------|------------------|-----|-----|------------------|-------|----------------|--------|---------|-----|---------|--------|--------------|----------|----------|-------|
| Arrays           | ■                | ●   |     |                  |       |                |        |         |     |         |        |              |          |          | ■     |
| Dip 2-Pin        |                  | ■   |     |                  |       |                |        |         |     |         |        |              |          |          |       |
| Disc             |                  |     |     | ■                |       |                |        |         |     |         |        |              |          |          |       |
| High Cap         |                  | ●   |     |                  | ●     |                |        |         |     |         |        |              |          |          |       |
| High Q           | ■                | ●   | ■   |                  |       |                |        |         |     |         |        |              |          |          |       |
| High Rel         | ●                | ●   | ●   |                  | ●     | ●              |        |         |     | ●       | ●      |              |          |          | ●     |
| High Temperature |                  | ●   |     |                  | ●     |                |        |         |     |         |        |              |          |          | ■     |
| High Voltage     | ■                | ●   |     | ■                | ●     |                |        |         |     |         |        |              |          | ■        | ■     |
| Low Inductance   |                  |     |     |                  |       |                |        |         |     |         |        |              |          |          |       |
| Multi-Layer      | ■                | ●   |     |                  | ●     | ●              |        |         |     |         |        |              |          |          | ■     |
| RF / Microwave   |                  | ■   | ■   |                  |       |                |        |         |     | ●       |        |              |          |          | ■     |
| Safety           |                  |     |     |                  |       |                |        |         |     |         |        |              |          | ■        | ■     |
| Single Layer     |                  |     | ■   |                  |       |                |        |         |     |         | ■      |              |          | ■        |       |
| Switch Mode      | ■                | ■   |     |                  | ■     |                |        |         |     |         |        |              |          |          |       |
| Tip 'n' Ring     |                  | ■   |     |                  | ■     |                |        |         |     | ■       |        |              |          |          | ■     |
| Trimmer          |                  |     |     |                  |       |                |        |         |     | ■       |        |              |          |          |       |

| Film & Mica                  | API Technologies | AVX | Cornell Dubilier | KEMET | Nichicon | Panasonic | TDK (Epcos) | Vishay | BCcomponents | Draloric | Rohdestein | WIMA |
|------------------------------|------------------|-----|------------------|-------|----------|-----------|-------------|--------|--------------|----------|------------|------|
| High Rel                     | ●                | ●   | ●                | ●     |          |           |             | ●      |              |          |            |      |
| Film                         |                  |     |                  |       |          |           |             |        |              |          |            |      |
| Motor Run                    |                  |     | ■                | ■     |          |           | ■           |        |              |          |            |      |
| Polyester                    |                  | ■   | ■                | ●     | ■        |           | ■           | ■      | ●            | ●        | ●          | ■    |
| Polypropylene                |                  |     |                  |       |          |           |             |        | ●            | ●        |            |      |
| Power Film                   |                  | ■   | ■                | ●     | ■        |           | ■           | ■      | ●            | ●        | ●          | ■    |
| Snubber                      |                  |     | ■                | ●     | ■        |           | ■           | ■      | ●            | ●        | ●          | ■    |
| Suppression X-Y (Safety Cap) | ■                |     |                  |       |          |           |             | ■      | ●            | ●        | ●          | ■    |
| Surface Mount                |                  | ■   | ■                | ●     | ■        |           | ■           | ■      | ●            | ●        | ●          | ■    |
| Mica                         |                  |     |                  |       |          |           |             |        |              |          |            |      |
| Metal Clad                   |                  |     | ●                |       |          |           |             |        |              |          |            |      |
| Mica                         |                  |     | ●                |       |          |           |             |        |              |          |            |      |
| Surface Mount                |                  |     | ●                |       |          |           |             |        |              |          |            |      |

| Tantalum                      | AVX | Cornell Dubilier | KEMET | Panasonic | Vishay | Sprague | Tansistor |
|-------------------------------|-----|------------------|-------|-----------|--------|---------|-----------|
| Micro-Chip                    | ■   |                  | ■     |           | ■      | ■       |           |
| Conformal Coated Chip         |     |                  |       |           |        | ●       | ●         |
| Dipped Radial                 |     | ■                | ●     | ●         | ●      | ●       | ●         |
| Fail Safe / Fused Chip        |     | ●                | ●     | ●         | ●      | ●       | ●         |
| Hermetic Through Hole         |     |                  | ■     |           |        | ●       | ●         |
| High Rel                      |     | ●                | ●     | ●         | ●      | ●       | ●         |
| High Temperature Chip         |     | ●                | ●     | ●         | ●      | ●       | ●         |
| Low ESR Chip                  |     | ●                | ●     | ●         | ●      | ●       | ●         |
| Low Profile Chip              |     | ●                | ●     | ●         | ●      | ●       | ●         |
| Moulded Chip                  |     | ●                | ●     | ●         | ●      | ●       | ●         |
| Moulded Through Hole          |     | ■                | ●     | ●         | ●      | ●       | ●         |
| Niobium Chip                  |     | ■                |       |           |        |         |           |
| Polymer Chip                  | ●   |                  | ●     | ■         | ■      |         |           |
| Solid Metal Case Through Hole |     | ■                | ●     | ●         | ●      | ●       | ●         |
| Supertan                      |     |                  |       |           | ■      | ■       | ■         |
| Wet Through Hole              | ●   |                  |       |           | ●      | ●       | ●         |

- Lead-free only parts available
- Lead & Lead-free compliant parts available
- ▲ Lead-only compliant parts available





# Circuit Protection & Electromagnetics

Circuit Protection & Electromagnetics

## Protection Devices

|                                       | AVX | Bourns | Eaton | KOA | Littelfuse | Murata | Panasonic | TDK | EPCOS | Vishay | BC Components | Dale |
|---------------------------------------|-----|--------|-------|-----|------------|--------|-----------|-----|-------|--------|---------------|------|
| <b>Overcurrent</b>                    |     |        |       |     |            |        |           |     |       |        |               |      |
| Axial (PICO) Fuses                    |     |        |       |     |            |        |           |     |       |        |               |      |
| Automotive (Blade) Fuses              |     |        |       |     |            |        |           |     |       |        |               |      |
| Cartridge Fuses                       |     |        |       |     |            |        |           |     |       |        |               |      |
| NTC Thermistors                       | ●   |        |       |     |            |        |           |     |       |        |               |      |
| Power (Electrical) Fuses              |     |        |       |     |            |        |           |     |       |        |               |      |
| PTC Thermistors                       |     |        |       |     |            |        |           |     |       |        |               |      |
| Radial Leaded Resettable Fuses (PPTC) |     |        |       |     |            |        |           |     |       |        |               |      |
| Radial Subminiature Fuses             |     |        |       |     |            |        |           |     |       |        |               |      |
| SMT Resettable Fuses (PPTC)           |     |        |       |     |            |        |           |     |       |        |               |      |
| Surface Mount (125V+) Fuses           |     |        |       |     |            |        |           |     |       |        |               |      |
| Telecom Resettable Fuses (PPTC)       |     |        |       |     |            |        |           |     |       |        |               |      |
| Thermal Cutoffs (TCO)                 |     |        |       |     |            |        |           |     |       |        |               |      |
| Thin Film (Chip) Fuses                | ●   |        |       |     |            |        |           |     |       |        |               |      |
| <b>Over Voltage</b>                   |     |        |       |     |            |        |           |     |       |        |               |      |
| Gas Discharge Tube (GDT)              |     |        |       |     |            |        |           |     |       |        |               |      |
| Line Protection Networks              |     |        |       |     |            |        |           |     |       |        |               |      |
| Polymer ESD Suppression               |     |        |       |     |            |        |           |     |       |        |               |      |
| Protection Thyristors                 |     |        |       |     |            |        |           |     |       |        |               |      |
| Surface Mount Varistors (MLV)         |     |        |       |     |            |        |           |     |       |        |               |      |
| Thermal (MOV)                         |     |        |       |     |            |        |           |     |       |        |               |      |
| Through-Hole Varistors (MOV)          |     |        |       |     |            |        |           |     |       |        |               |      |
| TVS Diodes                            |     |        |       |     |            |        |           |     |       |        |               |      |
| TVS Diodes Arrays                     |     |        |       |     |            |        |           |     |       |        |               |      |

## EMI/RFI & RF

|                        | Amphenol | API Technologies (Spectrum Control) | AVX | KEMET | Molex | Murata | Panasonic | Pulse | TDK | EPCOS | TE Connectivity | Tusonix (CTS) | Yageo |
|------------------------|----------|-------------------------------------|-----|-------|-------|--------|-----------|-------|-----|-------|-----------------|---------------|-------|
| EMI / RFI Filters      |          |                                     |     |       |       |        |           |       |     |       |                 |               |       |
| Feed-Thru Filters      |          |                                     |     |       |       |        |           |       |     |       |                 |               |       |
| RF / Microwave Filters |          |                                     |     |       |       |        |           |       |     |       |                 |               |       |
| SAW Filters            |          |                                     |     |       |       |        |           |       |     |       |                 |               |       |
| Surface Mount Filters  |          |                                     |     |       |       |        |           |       |     |       |                 |               |       |
| RF / Wireless Antennas | ■        |                                     |     |       |       |        |           |       |     |       |                 |               |       |

## Ferrites / Inductors / Transformers

|                               | API Delevan | ATC | AVX | Bourns | Eaton (Colltronics) | KEMET | KOA | Murata | Panasonic | Pulse | Samsung | TDK | EPCOS | TT Electronics (Bl Tech) | Vishay | Yageo |
|-------------------------------|-------------|-----|-----|--------|---------------------|-------|-----|--------|-----------|-------|---------|-----|-------|--------------------------|--------|-------|
| Air Coil Inductors            | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Common Mode Chokes            | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Custom Inductors              | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Ferrite Beads                 |             |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Ferrite Cores / Clamp Filters |             |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| High Current Inductors        | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Leaded Inductors              | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Military Inductors            | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Multilayer Inductors          |             |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Power Inductors               | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| RF Inductors                  | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Thin Film Inductors           |             |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Toroid Inductors              |             |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Transformers                  | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |
| Wirewound / Coil Inductors    | ●           |     |     |        |                     |       |     |        |           |       |         |     |       |                          |        |       |

## Sound Devices

|            | KYOCERA | Murata | Panasonic | TDK |
|------------|---------|--------|-----------|-----|
| Buzzer     |         |        |           |     |
| Microphone | ●       | ●      | ●         | ●   |
| Receiver   |         |        |           |     |
| Ringer     |         |        |           |     |
| Sensor     |         |        |           |     |
| Sounder    | ●       | ●      | ●         | ●   |
| Speaker    |         |        |           |     |

## Frequency Control

|                     | KYOCERA | Murata | Panasonic | Samsung | TDK | Vishay (Dale) |
|---------------------|---------|--------|-----------|---------|-----|---------------|
| Crystals            | ●       | ●      | ●         | ●       | ●   | ●             |
| Oscillators         | ●       | ●      | ●         | ●       | ●   | ●             |
| Piezo Sound Devices | ●       | ●      | ●         | ●       | ●   | ●             |
| Resonators          | ●       | ●      | ●         | ●       | ●   | ●             |
| Tuning Forks        | ●       | ●      | ●         | ●       | ●   | ●             |

- Lead-free only parts available
- Lead & Lead-free compliant parts available
- ▲ Lead-only compliant parts available

# Discretetes

| Discrete Semiconductors      | AVX | Bourns | KOA | Littelfuse | Panasonic | Toshiba | TT Electronics (Semelab) | TT Electronics (Optek) | Vishay |
|------------------------------|-----|--------|-----|------------|-----------|---------|--------------------------|------------------------|--------|
| <b>Diodes</b>                |     |        |     |            |           |         |                          |                        |        |
| Arrays                       |     | ■      |     | ■          | ■         | ■       | ◆                        |                        | ■      |
| Schottky                     |     |        |     | ■          | ■         | ■       | ◆                        |                        | ■      |
| Small Signal                 |     | ■      |     |            |           |         |                          |                        | ■      |
| Zener                        |     | ■      |     |            |           |         | ◆                        |                        | ■      |
| TVS Diodes                   | ■   |        |     | ■          |           |         | ◆                        |                        | ■      |
| TVS Diodes Arrays            |     | ■      | ■   | ■          |           |         |                          |                        | ■      |
| Bare Die Products and Wafers |     |        |     |            |           |         |                          |                        | ■      |
| <b>Rectifiers</b>            |     |        |     |            |           |         |                          |                        |        |
| Bridge                       |     | ■      |     |            |           |         |                          |                        | ■      |
| Standard                     |     | ■      |     |            | ■         |         | ◆                        |                        | ■      |
| Fast                         |     |        |     |            |           |         |                          |                        | ■      |
| Ultrafast                    |     |        |     |            |           |         | ◆                        |                        | ■      |
| Schottky                     | ■   | ■      |     | ■          | ■         | ■       |                          |                        | ■      |
| <b>Thyristors</b>            |     |        |     |            |           |         |                          |                        |        |
| Protection                   |     | ■      |     | ■          |           |         |                          |                        | ■      |
| Switching                    |     |        |     |            |           |         |                          |                        | ■      |
| Sidac                        |     | ■      |     | ■          |           |         |                          |                        | ■      |
| SCR                          |     | ■      |     | ■          |           |         |                          |                        | ■      |
| <b>Transistors</b>           |     |        |     |            |           |         |                          |                        |        |
| Bipolar                      |     |        |     |            | ■         | ■       | ◆                        |                        | ■      |
| Small Signal                 |     |        |     |            | ■         | ■       | ◆                        |                        | ■      |
| <b>Mosfets</b>               |     |        |     |            |           |         |                          |                        |        |
| Low Voltage                  |     |        |     |            | ■         | ■       | ◆                        |                        | ■      |
| Mid-voltage                  |     |        |     |            |           |         |                          |                        | ■      |
| High Voltage                 |     |        |     |            | ■         | ■       | ◆                        |                        | ■      |
| Automotive Qualified         |     |        |     |            | ■         | ■       |                          |                        | ■      |
| Mil Qualified                |     |        |     |            |           |         | ◆                        |                        | ■      |
| <b>Modules</b>               |     |        |     |            |           |         |                          |                        |        |
| Bridge                       |     |        |     |            |           |         |                          |                        | ■      |
| Diode                        |     |        |     |            |           |         |                          |                        | ■      |
| IGBT                         |     |        |     | ■          |           |         |                          |                        | ■      |
| Thyristor                    |     |        |     | ■          |           |         |                          |                        | ■      |
| MOSFET                       |     |        |     |            |           |         |                          |                        | ■      |

| Optoelectronics                       | Kingbright | Panasonic | Toshiba | TT Electronics (Optek) | Vishay |
|---------------------------------------|------------|-----------|---------|------------------------|--------|
| <b>Optocouplers</b>                   |            |           |         |                        |        |
| Standard Optocouplers                 | ■          |           | ■       | ■                      | ■      |
| IC Couplers                           |            |           | ■       | ■                      | ■      |
| High Voltage Couplers                 |            |           | ■       | ■                      | ■      |
| Solid State Relays                    |            |           | ■       | ■                      | ■      |
| <b>Infrared Components</b>            |            |           |         |                        |        |
| <b>Optical Sensors</b>                |            |           |         |                        |        |
| Ambient Light - Proximity Sensors     | ■          |           |         | ■                      | ■      |
| Ambient Light Sensors                 |            |           |         | ■                      | ■      |
| Proximity Sensors                     |            |           |         | ■                      | ■      |
| UV Sensors (A&B)                      |            |           |         | ■                      | ■      |
| Bio Sensors                           |            |           |         | ■                      | ■      |
| RGB Sensors                           | ■          |           |         | ■                      | ■      |
| Reflective Sensors                    | ■          |           |         | ■                      | ■      |
| Transmissive Sensors                  | ■          |           |         | ■                      | ■      |
| Infrared Emitters                     | ■          |           |         | ■                      | ■      |
| Photo Detectors (Diode / Transistors) | ■          |           |         | ■                      | ■      |
| Infrared Receiver Modules             |            |           |         | ■                      | ■      |
| <b>Visible LEDs</b>                   |            |           |         |                        |        |
| LEDs - Indication                     | ■          | ■         | ■       | ■                      | ■      |
| LEDs - Illumination <1W               | ■          | ■         | ■       | ■                      | ■      |
| LEDs - Illumination >1W               | ■          | ■         | ■       | ■                      | ■      |
| LED Modules                           | ■          |           |         | ■                      | ■      |
| LED Displays                          | ■          |           |         | ■                      | ■      |
| PCB Indicators                        | ■          |           |         | ■                      | ■      |
| Seven-Segment Displays                | ■          |           |         | ■                      | ■      |
| <b>OPTO Solutions</b>                 |            |           |         |                        |        |
| <b>Custom Specific Solutions</b>      |            |           |         |                        |        |
| LED Drivers                           |            | ■         |         | ■                      | ■      |
| OLED Displays                         |            |           |         | ■                      | ■      |
| LCD Displays                          |            |           |         | ■                      | ■      |
| Infrared Touch Panels                 |            |           |         | ■                      | ■      |

| ICs - Power and Linear                      | Toshiba | TT Electronics (Semelab) | Vishay |
|---|---------|--------------------------|--------|
| <b>Analogue Switches &amp; Multiplexers</b> |         |                          |        |
| Logic ICs                                   | ■       |                          |        |
| Motor Control Drivers                       |         |                          | ■      |
| Diodes                                      |         | ▲                        | ■      |
| Transistors                                 |         | ▲                        | ■      |
| Voltage Regulators                          |         | ▲                        | ■      |
| DC / DC Converters                          |         |                          | ■      |
| Smart Load Switches                         |         |                          | ■      |

- Lead-free only parts available
- Lead & Lead-free compliant parts available
- ◆ Mil-Spec Discretetes

# Sensors

# Power Supplies

Sensors

Power Supplies

| Sensors   | ALPS | Amphenol Advanced Sensors | AVX | Bourns | Honeywell | Littelfuse | Molex | Murata | Omron | Panasonic | Sensata - BEI Sensors | Sensata & Kavlico | Standex Meder | TDK EPCOS | TE Sensor Solutions | TT Electronics | Vishay |
|---|------|---------------------------|-----|--------|-----------|------------|-------|--------|-------|-----------|-----------------------|-------------------|---------------|-----------|---------------------|----------------|--------|
| <b>Motion/Speed/Position</b>                            |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Accelerometer   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Gyroscope   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Inclinometer / Tilt                                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Shock / Vibration                                       |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Inertial Measurement Unit                               |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Encoder / Rotary - Board Mount                          |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Encoder / Rotary - Industrial                           |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Face Recognition Sensors (HVC - Human Vision Component) |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Proximity - Inductive                                   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Proximity - Magneto-resistive                           |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Proximity - Optical                                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Speed Sensor  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Hall Effect Sensors                                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Resolver  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Ultrasonic  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Optical</b>  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Ambient Light   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Fibre Optic   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| PIR / Infrared  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Matrix Sensors  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Laser   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Proximity - Optical                                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Solar   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Ultra Violet  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Colour Sensors  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Pressure</b>   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Board Mount Pressure                                    |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Disposable Medical Pressure Sensors                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Dies  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Altimeter / Barometric                                  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Combination MEMS  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Industrial Pressure                                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Pressure Switches                                       |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Air Quality</b>                                      |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| CO <sub>2</sub>   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| VOC (Volatile Organic Compound)                         |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Gas   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Dust  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Ionizer   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Force</b>  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Force   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Load Cell / Load Pin                                    |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Torque  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Flow</b>   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Air Flow  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Liquid Flow   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Flow Switch   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Fluid Property Sensors                                  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Turbidity   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Temperature &amp; Humidity</b>                       |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Combination MEMS, Digital Temp. Sensors                 |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Humidity  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| NTC Thermistor - Leaded                                 |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| NTC Thermistor - SMT                                    |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Probes & Assemblies                                     |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| PTC Thermistors   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| RTD / PTC Thermistors - Customised - Platinum           |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| PTC Thermistors - Customised - Ceramic Heating          |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Heaters - Copper Customised                             |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Thermocouples   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Thermopiles / Human Presence Detection - Solutions      |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Thermopiles / Human Presence Detection - Component      |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Thermostats   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Level Sensors</b>                                    |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Liquid Level  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Urea, Water (WIF / WIF+WDS / WS), Diesel                |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Powder Level Sensors                                    |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Hydra-static Pressure Cells                             |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| <b>Other</b>  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Current Sensors   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Capacitive Touch  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Inductive Sensors - Factory Automation                  |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Light Curtain Safety - Factory Automation               |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Magnets   |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Medical Sensor Cable Assemblies / Pulse Oximetry Probes |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |
| Sensor Development Boards                               |      |                           |     |        |           |            |       |        |       |           |                       |                   |               |           |                     |                |        |

| Power Supplies                       | Artesyn | Flex Power Modules | GE Critical Power | MEAN WELL | Murata Power Solutions |
|--------------------------------------|---------|--------------------|-------------------|-----------|------------------------|
| <b>Internal / Embedded - AC / DC</b> |         |                    |                   |           |                        |
| Low to Mid Power (1W - 500W)         |         |                    |                   |           |                        |
| High Power (500 - 1.5KW)             |         |                    |                   |           |                        |
| Single Output                        |         |                    |                   |           |                        |
| Multi-Output (Dual, Triple, Quad)    |         |                    |                   |           |                        |
| PCB Mount                            |         |                    |                   |           |                        |
| Open Frame                           |         |                    |                   |           |                        |
| U-Channel / Enclosed                 |         |                    |                   |           |                        |
| Modular / Configurable               |         |                    |                   |           |                        |
| ATX                                  |         |                    |                   |           |                        |
| Front End, Bulk Power                |         |                    |                   |           |                        |
| Medical Rated                        |         |                    |                   |           |                        |
| Conduction Cooled                    |         |                    |                   |           |                        |
| Industrial Temperature               |         |                    |                   |           |                        |
| Extended Temperature                 |         |                    |                   |           |                        |
| °C PMBus Control / Interface         |         |                    |                   |           |                        |
| <b>External - AC / DC</b>            |         |                    |                   |           |                        |
| Wall Mount Adapters                  |         |                    |                   |           |                        |
| Desktop                              |         |                    |                   |           |                        |
| Medical Rated                        |         |                    |                   |           |                        |
| DIN Rail                             |         |                    |                   |           |                        |
| High Power (1KW - 24KW)              |         |                    |                   |           |                        |
| LED Drivers                          |         |                    |                   |           |                        |
| Power Over Ethernet (PoE)            |         |                    |                   |           |                        |
| <b>Specific Purpose</b>              |         |                    |                   |           |                        |
| UPS                                  |         |                    |                   |           |                        |
| Battery Charging                     |         |                    |                   |           |                        |
| Inverter (DC/AC)                     |         |                    |                   |           |                        |
| Security                             |         |                    |                   |           |                        |
| <b>DC / DC</b>                       |         |                    |                   |           |                        |
| <b>Isolated DC / DC Converters</b>   |         |                    |                   |           |                        |
| Fractional Brick                     |         |                    |                   |           |                        |
| Digital Control                      |         |                    |                   |           |                        |
| Industrial Pin-Out                   |         |                    |                   |           |                        |
| Intermediate Bus Converter           |         |                    |                   |           |                        |
| Low Power Unregulated                |         |                    |                   |           |                        |
| Wide Input Range 4:1                 |         |                    |                   |           |                        |
| Surface Mount                        |         |                    |                   |           |                        |
| DC/DC Railway                        |         |                    |                   |           |                        |
| <b>Non Isolated POL Converters</b>   |         |                    |                   |           |                        |
| Digital Control                      |         |                    |                   |           |                        |
| Through Hole                         |         |                    |                   |           |                        |
| Single In Line                       |         |                    |                   |           |                        |
| Surface Mount                        |         |                    |                   |           |                        |
| <b>Ancillary Power Products</b>      |         |                    |                   |           |                        |
| ATCA PIM Modules                     |         |                    |                   |           |                        |
| RF / Power Amplifier                 |         |                    |                   |           |                        |
| PFC Modules                          |         |                    |                   |           |                        |
| 300Vin Modules                       |         |                    |                   |           |                        |
| <b>Embedded DC / DC</b>              |         |                    |                   |           |                        |
| Open Frame / Enclosed                |         |                    |                   |           |                        |
| Front End Bulk Power                 |         |                    |                   |           |                        |

| Power Supply Accessories     | 3M | EBM PAPER | Ohmite |
|------------------------------|----|-----------|--------|
| <b>Thermal Management</b>    |    |           |        |
| DC Fans                      |    |           |        |
| AC Fans                      |    |           |        |
| Heatsinks                    |    |           |        |
| Thermal Foils                |    |           |        |
| Thermal Adhesive / Compounds |    |           |        |





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TTI, Inc.
2441 Northeast Parkway
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T: +1 817 740 9000
F: +1 817 740 9898
E: information@ttiinc.com

European Headquarters

TTI, Inc.
Ganghoferstr. 34
82216 Maisach-Gernlinden
Germany
T: +49 (0) 81 42 66 80 0
F: +49 (0) 81 42 66 80 490
E: sales@de.ttiinc.com

TTI, Inc. Sales

Austria
Vienna
T: +43 (0) 18 79 85 90
E: sales.vienna@at.ttiinc.com

Benelux
Eindhoven
T: +31 (0) 40 290 1616
E: sales.benelux@nl.ttiinc.com

Bulgaria
T: +359 52 51 10 59
E: sales.varna@bg.ttiinc.com

Czech/Slovak Republic
Brno
T: +420 541 126 714
E: sales.brno@cz.ttiinc.com

Denmark
Copenhagen
T: +45 (0) 43 29 35 35
E: sales.copenhagen@dk.ttiinc.com

Hammel
T: +45 (0) 38 41 31 00
E: sales.copenhagen@dk.ttiinc.com

Estonia
Tallinn
T: +372 664 81 00
E: sales.finland@fi.ttiinc.com

Finland & Baltic Region
Espoo
T: +358 98 94 65 200
E: sales.finland@fi.ttiinc.com

France
Brive
T: +33 (0) 5 55 92 92 93
E: sales.france@fr.ttiinc.com

Bron
T: +33 (0) 472 81 2030
E: sales.lyon@fr.ttiinc.com

Bruz
T: +33 (0) 2 99 77 60 84
E: sales.rennes@fr.ttiinc.com

La Ciotat
T: +33 (0) 442 84 4142
E: sales.marseille@fr.ttiinc.com

Montigny Le Bretonneux
T: +33 (0) 130 13 7380
E: sales.paris@fr.ttiinc.com

Germany
Berlin
T: +49 (0) 30 8877 40 200
E: sales.berlin@de.ttiinc.com

Dortmund
T: +49 (0) 2301 91 304 0
E: sales.dortmund@de.ttiinc.com

Frankfurt
T: +49 (0) 6102 5999 100
E: sales.frankfurt@de.ttiinc.com

Hanover
T: +49 (0) 5 11 7 80 59 0
E: sales.hannover@de.ttiinc.com

Munich
T: +49 (0) 81 42 66 80 110
E: sales.munich@de.ttiinc.com

Pforzheim
T: +49 (0) 7231 14788 0
E: sales.stuttgart@de.ttiinc.com

Hungary
Budapest
T: +36 1 40 22 111
E: sales.budapest@hu.ttiinc.com

Ireland
T: +353 (0) 21 480 8070
E: sales.ireland@ie.ttiinc.com

Israel/Ray-Q Ltd.
Airport City
T: +972 3 975 3333
T: +972 54 2151402
E: sales@ray-q.com

Italy
Bologna
T: +39 051 632 1863
E: sales.milan@it.ttiinc.com

Civitanova Marche
T: +39 0733 81 8655
E: sales.milan@it.ttiinc.com

Florence
T: +39 (0) 55 094 63 76
E: sales.milan@it.ttiinc.com

Milan
T: +39 02 822 521
E: sales.milan@it.ttiinc.com

Naples
T: +39 (0) 81 7148661
E: sales.milan@it.ttiinc.com

Padova
T: +39 049 774 683
E: sales.milan@it.ttiinc.com

Rome
T: +39 0774 57 1302
E: sales.rome@it.ttiinc.com

Norway
Drammen
T: +47 (0) 92 66 87 66
E: sales.norway@no.ttiinc.com

Poland
Kwidzyn
T: +48 (0) 55 279 67 57
E: sales.poland@pl.ttiinc.com

Portugal
T: +351 252 493084
E: sales.barcelona@es.ttiinc.com

Romania
Cluj Napoca
T: +40 (0) 264 439 103
E: sales.romania@ro.ttiinc.com

Russia
Saint Petersburg
T: +7 (0) 812 4962053
E: sales.russia@ru.ttiinc.com

South Africa
Johannesburg
T: +27 (0) 11 795 2691
E: sales.southafrica@za.ttiinc.com

Spain
Barcelona
T: +34 (0) 93 645 25 75
E: sales.barcelona@es.ttiinc.com

Madrid
T: +34 (0) 91 416 11 90
E: sales.madrid@es.ttiinc.com

Vizcaya
T: +34 (0) 94 623 25 80
E: sales.bilbao@es.ttiinc.com

Sweden
Gothenburg
T: +46 (0) 31 741 12 90
E: sales.gothenburg@se.ttiinc.com

Stockholm
T: +46 (0) 8 594 11 800
E: sales.stockholm@se.ttiinc.com

Switzerland
Baar
T: +41 (0) 41 76741 90
E: sales.swiss@ch.ttiinc.com

Egypt, Morocco & Tunisia
T: +216 (0) 71 862 693
E: sales.tunis@fr.ttiinc.com

Turkey
Istanbul
T: +90 (0) 216 688 91 75 76
E: sales.turkey@tr.ttiinc.com

United Kingdom
Basildon
T: +44 (0)1268 553676
E: sales.essex@uk.ttiinc.com

High Wycombe
T: +44 (0)1494 460000
E: sales.london@uk.ttiinc.com

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