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Vishay Intertechnology, Inc.

Consumer
(Home Appliances)



One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components





Consumer

Home Appliances

Air Conditioners	2
Induction Cooking	3
Washing Machines	4
Refrigerators / Freezers	5

More information on the Engineer's Toolbox, including product datasheet links, can be found at www.vishay.com/ref/et3.

For inquiries, please contact your local sales representative.

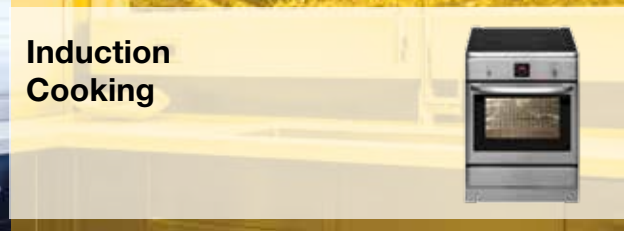
Key components for HOME APPLIANCES



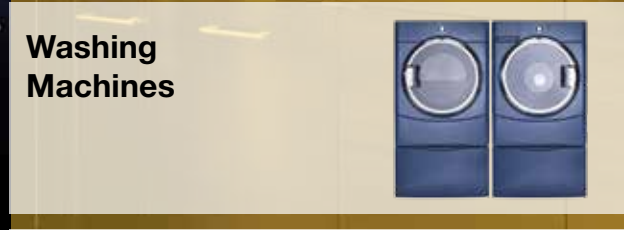
THE VISHAY ADVANTAGE
Efficiency
Compact Dimensions
Low Weight
Safety Approvals
ESD Protection
High-Voltage Capabilities
Long Useful Life
and more....



Air Conditioners



**Induction
Cooking**



**Washing
Machines**



**Refrigerators /
Freezers**






Air Conditioners



RESISTORS

High Pulse Load MELF Resistors

[CMA0204...e3](#)



- Extreme surge capability up to 6 kV ESD, 4 kV 1.2 / 50 pulse
- Advanced carbon film technology, sulfur resistant, GREEN product

MOSFETs

N-Channel 100 V (D-S) 175 °C MOSFET

[SUP85N10-10](#)




- Classic TrenchFET® technology, maximum $R_{DS(on)}$ 10 mΩ
- Popular TO-220 packaging

RECTIFIERS

Enhanced isoCink+™ Bridge Rectifiers

[PB3510](#)




- Enhanced high current density single in-line
- UL recognition file number E312394

MOSFETs

P-Channel 60 V (D-S) Power MOSFET

[IRFI9Z34G](#)




- Rugged planar technology, maximum $R_{DS(on)}$ 140 mΩ
- FullPAK packaging eliminates isolation, maximum continuous current of -12 A

DIODES

TRANSZORB® Transient Voltage Suppressors

[P6KE200A](#)



- 600 W peak pulse power capability with a 100/1000 μs waveform
- AEC-Q101 qualified

RESISTORS

Power Metal Strip® Resistors, High Power (7 W) Low Value, Surface-Mount

[WSHM2818](#)



- Very high power rating of 7 W in small 2818 package
- Very low resistance values from 0.001 Ω to 0.10 Ω, with tolerance of 1 %

RECTIFIERS

Dual Common Cathode Ultrafast Rectifier

[FEP30JP](#)




- Ultrafast recovery time
- Low switching losses, high efficiency

RESISTORS

Power Metal Strip® Resistors, Low Value (Down to 0.001 Ω), Surface-Mount

[WSR](#)




- High power ratings to 5 W in molded 4527 size package
- Molded package with compliant leads, give superior thermal shock resilience

OPTOELECTRONICS

Optocoupler, Power Phototriac

[VO2223A](#)




- Optically coupled phototriac driving a power triac in a DIP-8 package
- Load current of 1 A_{RMS} and 5300 V of input-to-output isolation

NON-LINEAR RESISTORS

NTC Thermistor Sensors – Pipe Type with Fast Time Response

[NTCLP450...](#)




- Miniature pipe sensor
- Fast time response vs. industry standards

OPTOELECTRONICS

IR Receiver with Copper Leadframe for High Humidity / Saline Atmosphere

[TSOP34xxxR](#)



- Industry leading range of 45 m, directivity of ± 45°, and 38 kHz carrier frequency
- Minimum irradiance of 0.08 mW/m², and featuring AGC-4 noise suppression

FILM CAPACITORS

Metallized Polypropylene Film Capacitor, DC-Link Capacitor

[MKP1848C](#)



- Compact and high-performance DC-Link
- Environment-friendly materials (halogen-free and Vishay GREEN)

View datasheets for these products www.vishay.com/ref/et3cn6a



Induction Cooking



CERAMIC CAPACITORS

AC Line Rated Disc Capacitors,
Class X1, 760 V_{AC};
Class Y1, 500 V_{AC}



[VY1](#)

- X1 / Y1 safety rating according to IEC 60384-14, 3rd edition
- Highest reliability and lifetime, operating temperature: -40 °C to +125 °C

RECTIFIERS

**Enhanced isoCink+™
Bridge Rectifiers**



[PB3006-E3](#)

- UL recognition file number E312394
- Enhanced high current density single in-line package

FILM CAPACITORS

**AC and Pulse Metallized
Polypropylene Film
Capacitors, MKP Axial Type**



[MKP1839HQ](#)

- For low building height applications
- For precision applications, with tolerances down to ± 1 %

NON-LINEAR RESISTORS

**NTC Thermistors,
Standard Lug Sensors**



[NTCALUG01A](#)

- Robust surface temperature sensor
- AEC-Q200 compliant, UL recognized

RESISTORS

Cemented Wirewound Resistors

[AC03](#)

- Non-flammable cement coating, good size-to-power ratio
- Power: 3 W, excellent pulse handling capability, various lead forming options



MOSFETs

**E Series 600 V N-Channel
Power MOSFET**



[SiHB15N60E](#)

- High-performance E Series, high-voltage technology, maximum R_{DS(on)} 280 mΩ
- Popular D²PAK packaging, maximum continuous current of 15 A

RESISTORS

**Power Metal Strip® Resistors,
Very High Power (to 3 W)**

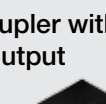


[WSLP2512](#)

- Very high power rating of 3 W in 2512 package
- Extremely low resistance values from 0.0005 Ω to 0.01 Ω, and tolerance of 1 %

OPTOELECTRONICS

**1 MBd High-Speed Optocoupler with
Photodiode-to-Transistor Output**



[6N136](#)

- Transmit signals between two optically separated circuits to frequencies of 2 MHz
- Isolation test voltage of 5300 V_{RMS}, TTL compatible, 1 Mbit/s data rate

MOSFETs

**P-Channel 30 V
(D-S) MOSFET**



[Si2307CDS](#)

- Classic TrenchFET® technology, maximum R_{DS(on)} 88 mΩ
- Popular SOT-23 packaging

DIODES

**Small-Signal Schottky Diodes,
Single and Dual**



[BAT54 / MMSZ5242B](#)

- AEC-Q101 qualified
- Very low turn-on voltage

OPTOELECTRONICS

**Fully Integrated Proximity and
Ambient Light Sensor with
I²C Interface**



[VCNL4010](#)

- Infrared emitter is included in the 3.95 mm x 3.95 mm x 0.75 mm SMD pkg.
- 16-bit resolution, proximity range of up to 20 cm with programmable thresholds

FILM CAPACITORS

**Metallized Polypropylene
Film Capacitors,
DC-Link Capacitor**



[MKP1848C](#)

- Compact and high-performance DC-Link
- Environment-friendly materials (halogen-free and Vishay GREEN)

View datasheets for these products
www.vishay.com/ref/et3cn6b



Washing Machines



RESISTORS

High-Ohmic / High-Voltage Metal Glaze Leaded Resistors



[VR25](#)

- Small size (0207), suitable for high-humidity environments
- High continuous voltage of 1600 V, and high pulse loading capability of 7 kV

MOSFETs

P-Channel 30 V (D-S) MOSFET

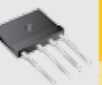


[Si2307CDS](#)

- Classic TrenchFET® technology, maximum $R_{DS(on)}$ 88 m Ω
- Popular SOT-23 packaging

RECTIFIERS

Single-Phase, Single In-Line Bridge Rectifiers



[GSIB2560-E3](#)

- UL recognition file number E54214
- High surge current capability

DIODES

TRANSZORB® Transient Voltage Suppressors



[P6KE200A](#)

- 600 W peak pulse power capability with a 100/1000 μ s waveform
- Excellent clamping capability, very fast response time, low incremental surge resistance

NON-LINEAR RESISTORS

SMD 0603, Glass Protected NTC Thermistors



[NTCS0603](#)

- AEC-Q200 compliant
- Glass protected with flex terminations

CERAMIC CAPACITORS

Internal Design Reduces Risk of Shorts Caused by Board Flex, High Breakdown Voltage

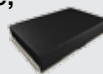


[VJ OMD Series](#)

- Polymer termination available for intensive board flex requirements
- 100 % voltage conditioning available up to 630 V_{DC} rating (process code "5H")

RESISTORS

Power Metal Strip® Resistors, High Power (7 W), Low Value, Surface-Mount



[WSHM2818](#)

- Very high power rating of 7 W in small 2818 package
- Very low resistance values, 0.001 Ω to 0.10 Ω , with tolerance of 1 %

OPTOELECTRONICS

Optocoupler, Phototransistor Output with Broad Operating Temperature Range



[VO615A](#)

- 6 kV peak transient overvoltage protection in a 4-pin DIP or SMD package
- Temp. range -55 °C to +110 °C with VDE, BSI, FIMKO, UL, cUL, and CQC certification

FILM CAPACITORS

Interference Suppression Film Capacitors, MKP Radial Potted Type



[MKP339](#)

- RFI X2 capacitor for standard across-the-line applications

MOSFETs

N-Channel 800 V (D-S) Power MOSFET



[IRFBE20](#)

- Rugged planar technology, maximum $R_{DS(on)}$ 6.5 Ω
- Popular TO-220 packaging, maximum continuous current of 1.8 A

ALUMINUM CAPACITORS

Aluminum Capacitors, Power Miniaturized, General Purpose Snap-In



[093PMG-SI](#)

- Standard snap-in series
- Useful life: 2000 h at 85 °C

RESISTORS

Cemented Fusible Wirewound Safety Resistors



[AC03...CS](#)

- 3 W, UL 1412 approved, non-flammable cement coating
- Surge handling of 4 kV, safe and silent fusing without flame and explosion

View datasheets for these products
www.vishay.com/ref/et3cn6c




Refrigerators / Freezers



CERAMIC CAPACITORS

AC Line Rated Disc Capacitors, Class X1, 760 V_{AC}; Class Y1, 500 V_{AC}




[VY1](#)

- X1 / Y1 safety rating according to IEC 60384-14, 3rd edition
- Highest reliability and lifetime, operating temperature: -40 °C to +125 °C

RECTIFIERS

Surface-Mount Ultrafast Plastic Rectifier



[MURS160-M3](#)

- Low switching losses, high efficiency
- Ultrafast reverse recovery time

CERAMIC CAPACITORS

IEC 60384-14:2005, CAN/CSA/cCSAus, and ANSI/UL CB Certificates




[VJ2220Y182KXUSTX1](#)

- Surface-mount design: simpler assembly and reduced board space requirement
- Robust design build with wet process

MOSFETs

High-Voltage 400 V V_{DS} Power MOSFET



[IRF740PBF](#)

- Dynamic dV/dt rating, repetitive avalanche rated
- Fast switching, ease of paralleling, simple drive requirement

RESISTORS

Cemented Wirewound Resistors




[AC03](#)

- Non-flammable cement coating, good size-to-power ratio
- Power: 3 W, excellent pulse handling capability, various lead forming options

DIODES

Small-Signal Schottky Diodes, Single and Dual




[BAT54S-V-GS08](#)

- AEC-Q101 qualified
- Very low turn-on voltage

NON-LINEAR RESISTORS

NTC Thermistors, Refrigerator Sensors



[NTCACAPE3...](#)

- Refrigerator sensor
- Double insulated

RESISTORS

Cemented Fusible Wirewound Safety Resistors




[AC05...CS](#)

- 5 W, UL 1412 approved, non-flammable cement coating
- Surge handling of 6 kV, safe and silent fusing without flame and explosion

MOSFETs

P-Channel 60 V (D-S) MOSFET




[Si9407BDY](#)

- Classic TrenchFET® technology, maximum R_{DS(on)} 120 mΩ
- Popular SO-8 packaging

RESISTORS

Power Metal Strip® Resistors, Low Value (Down to 0.0005 Ω), Surface-Mount




[WSL2512](#)

- Extremely low resistance values from 0.0005 Ω to 0.5 Ω and tolerance of 1 %
- High power of 1 W in 2512 size resistor

FILM CAPACITORS

Interference Suppression Film Capacitors, MKP Radial Potted Type




[MKP339](#)

- RFI X2 capacitor for standard across-the-line applications

OPTOELECTRONICS

Optocoupler, Phototransistor Output with Broad Operating Temperature Range



[VO615A](#)

- 6 kV peak transient overvoltage protection in a 4-pin DIP or SMD package
- Temp. range -55 °C to +110 °C with VDE, BSI, FIMKO, UL, cUL, and CQC certification

View datasheets for these products www.vishay.com/ref/et3cn6d



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ABOUT TTI, INC.

TTI Inc., a subsidiary of Berkshire Hathaway, is a world leading specialist distributor of connectors and passive, electromechanical and discrete components. TTI's philosophy is "Lead by Design", and the company differentiates itself by focusing on people, parts and processes. The company's aim is to become the distributor of choice for customers and suppliers in Europe alike by introducing new product technologies and by stocking broad and deep across its franchise base. TTI employs sophisticated inventory management processes which ensure that the company can react immediately to changes in component demand due to fluctuating markets and supply chains. For further information about TTI, please refer to: www.ttieurope.com.



**A WORLD OF
SOLUTIONS**

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