



ttieurope.com

Panasonic

# TTI Push Products

## POWER CHOKE COIL METAL COMPOSITE TECHNOLOGY – LARGE CURRENT SERIES (ETQP8M\*J\*)

- > Large Current Capability
- > High Vibration Proof: up to 30G
- > Solution for downsizing with Low power consumption, SMD solution
- > Lower power loss at High switching frequency and outstanding power efficiency.

### APPLICATIONS:

- > Automotive (Engine, Transmission, Brake EPS, etc)
- > Transportation
- > Battery Management System
- > Industry
- > Factory Automation



Series	Power Choke Coil for Automotive (MC type)	Power Choke Coil for Automotive-LP (MC type)	Large current Power Choke Coil for Automotive (MC type)	Power Choke Coil for Automotive-H (MC type)
PN	ETQP*M***Y**	ETQP*M***KV*	ETQP8M***JFA	ETQP*M***HF*
Size [L×W×H]	(mm) 5.5×5.0×3.0 – 10.9×10.0×6.0	5.5×5.0×3.0 – 10.7×10.0×4.0	12.6×13.2×8.0	5.5×5.0×3.0, 6.5×6.0×3.0
Inductance	(μH) 0.33 – 100	0.68 – 47	0.33 – 4.7	2.2, 10
Rated Current	(A) 1.4 – 33.2	1.7 – 19.6	16.8 – 44.4	5.2, 3.0
DCR	(mΩ) 1.1 – 348	2.6 – 206	0.7 – 4.9	19.5, 68.0
Operating temperature range	(°C) -40 – +150 (Incl. self-temperature rise)	-55 – +155 (Incl. self-temperature rise)	-40 – +160 (Incl. self-temperature rise)	-40 – +150 (Incl. self-temperature rise)
Features	High Saturation Current Type	Low Profile Type	Large Current Type	High Frequency Low Loss Type



## E-CAPS: LONG LIFE, LOW IMPEDANCE AND HIGH RIPPLE CURRENT

- > High Temperature Lead-Free Reflow
- > Ensures High-Quality Performance
- > Environmentally Friendly
- > AEC-Q200 Compliant
- > Stock available
- > Stable lead times

## CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

The Hybrid Caps optimizes designs for performance, Low Leakage Currents, long life, low ESR values. The products are AEC-Q200 compliant and can endure high humidity conditions rated at 85°C /90% RH – 2,000h while offering tiered ripple current rating at 135°C and 145°C. Handles Ripple current up to three times higher than comparable electrolytic capacitors.

### APPLICATIONS:

- > Engine ECU
- > LED Lighting
- > Power supply



Series	ZA	ZC	ZK	ZE
Temperature range	[°C] -55 to 105	-55 to 125	-55 to 125	-55 to 145
Voltage classes	[V] 25-80	25-80	25-35	25-63
Capacitance	[μF] 10-330	10-330	33-470	33-330
Endurance	10000h@105°C	4000h@125°C	4000h@125°C	2000h@145°C 4000h@135°C
Ripple current [100KHz/max temp]	0.75-2.5A r.m.s	0.5-2A r.m.s	0.66-2.8A r.m.s	up to 2.0A r.m.s
ESR	[mΩ] down to 20	down to 20	down to 20	down to 20

For more information please visit: [www.ttieurope.com](http://www.ttieurope.com)



ttieurope.com

**Panasonic**

# TTI Push Products

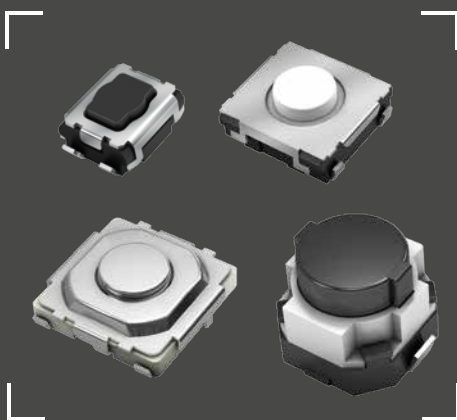
## POLYMER CAPACITORS: POSCAP, SP-CAP AND OS-CON

Polymer Capacitors have excellent frequency characteristics. Thanks to their ultra-low ESR values, polymer capacitors exhibit low impedance near their resonance point which reduces AC ripple in power circuits.

- > High Miniaturization Potential
- > No DC Bias Effect & No Voltage Derating
- > No Capacitance Drift
- > Long Lifetime & High Reliability



		OS-CON	SP-Caps	POSCAP
Voltage Range	[VDC]	2 to 100	2 to 35	2 to 35
Capacitance Range	[µF]	3.3 to 2700	2.2 to 560	2.7 to 1500
Temperature Range	[°C]	-55 to +125	-55 to +125	-55 to +125
Endurance		2000h@125°C	1000h@125°C	1000h@125°C
ESR	[mΩ]	Down to 5	Down to 3	down to 5
Ripple Current		up to 7.2Arms	up to 10.2Arms	up to 6.1 Arms
Size	[mm]	4 to 10 (Ø)	7.3 x 4.3	2.0 x 1.25 to 7.3 x 4.3
Height	[mm]	4.4 to 13	0.9 to 3.0	0.9 to 3.8



## LIGHT TOUCH SWITCHES: PANASONIC NO. 1 SUPPLIER OF TACTILE SWITCHES WORLDWIDE

Panasonic Light Touch Switches, which are often referred to as tact or tactile switches in the industry, are momentary push-on switches to be used with a small rating (20mA and 15Vdc). They provide a unique sharp and clear click operational feel, have low contact resistance, small bouncing noise, high contact reliability and come in a wide selection of operating forces.

- > Mostly temperature range from -40 up to +85°C
- > Excellent tactile behaviour
- > Long life types available, up to 2M cycles
- > Variety of IP67 switches available

### APPLICATIONS:

- > Wearable devices (smart watches, wristbands, etc.)
- > Hearable devices (headphones, hearing aids, etc.)
- > Healthcare devices (portable medical devices, etc.)
- > Automotive application
- > Industrial application

## SMD NTC THERMISTORS ERT SERIES

- > Surface Mount Device (.01005, 0201, 0402, 0603)
- > Highly reliable multilayer / monolithic structure / unique electrode design.(temperature operating range -40 to 150°C)
- > High temperature accuracy by adapting our original electrode structure
- > High accuracy from 1% tolerance available
- > AEC-Q200 qualified

### APPLICATIONS;

- > Smart Meter
- > Lighting (LED Driver, Light Control Unit)
- > Battery Management Systems
- > Power & Steering (Engine Control, Oil/Fuel Pump, Power Steering)
- > Body & Security (Climate Control, Sunroof, ABS / ESP / TCS / Breaks)
- > Infotainment (Display/Navi, Radar, Intercom System)



Series	High precision type (narrow tolerance)	Standard type	Automotive type
PN	ERTJ*****F* / ERTJ*****G*	ERTJ*****H* / ERTJ*****J*	ERTJ*****M
Size	01005 ~ 0603	01005 ~ 0603	0402, 0603
Resistance Value	R25: 10 ~ 220 kΩ ±1%,2%	R25: 0.022 ~ 470 kΩ ±3%,5%	R25: 1 ~ 470 kΩ ±1%,2%,3%,5%
B value	B25/50: 3380 ~ 4700 K ±1%	B25/50: 2750 ~ 4700 K ±2%,3%	B25/50: 3380 ~ 4700 K ±1%

For more information please visit: [www.ttieurope.com](http://www.ttieurope.com)