

Conductive Polymer Tantalum Solid Capacitors (POSCAP)

Small size / Low profile, Large capacitance
High voltage



Product summary

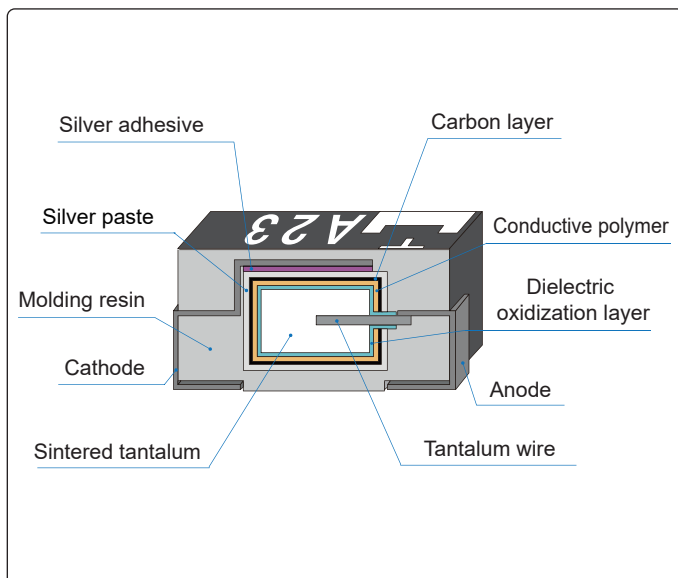
POSCAP utilizes sintered Tantalum as an anode system and highly conductive polymer created with Panasonic's unique method as a cathode system.

This enabled POSCAP to be thin, small and at the same time have low ESR (Equivalent Series Resistance) and superior high frequency characteristics. These features make POSCAP one of the best candidates for digital/high frequency applications. POSCAP also has high reliability and heat resistance.

Features

- Achieves low ESR characteristics by using a conductive polymer as the electrolyte
 - The impedance is an ideal frequency response, and it is ideal for coupling capacitors because it is used for noise rejection.
 - Capable of flowing a large amount of ripple current, it is ideal as a backup capacitor for smoothing switching power supplies and load fluctuations around the CPU.
 - Ideal as a backup capacitor in circuits that consume large currents at high speeds.
- High reliability and High voltage
 - We also have a wide range of 35 V high-voltage and high-reliability products for automotive and industrial equipment applications.
- Excellent temperature characteristics
 - Since a conductive polymer with excellent dense adhesion is formed, the temperature dependence of impedance and ESR is small, and it can be used in a wide range of equipment.

Structure



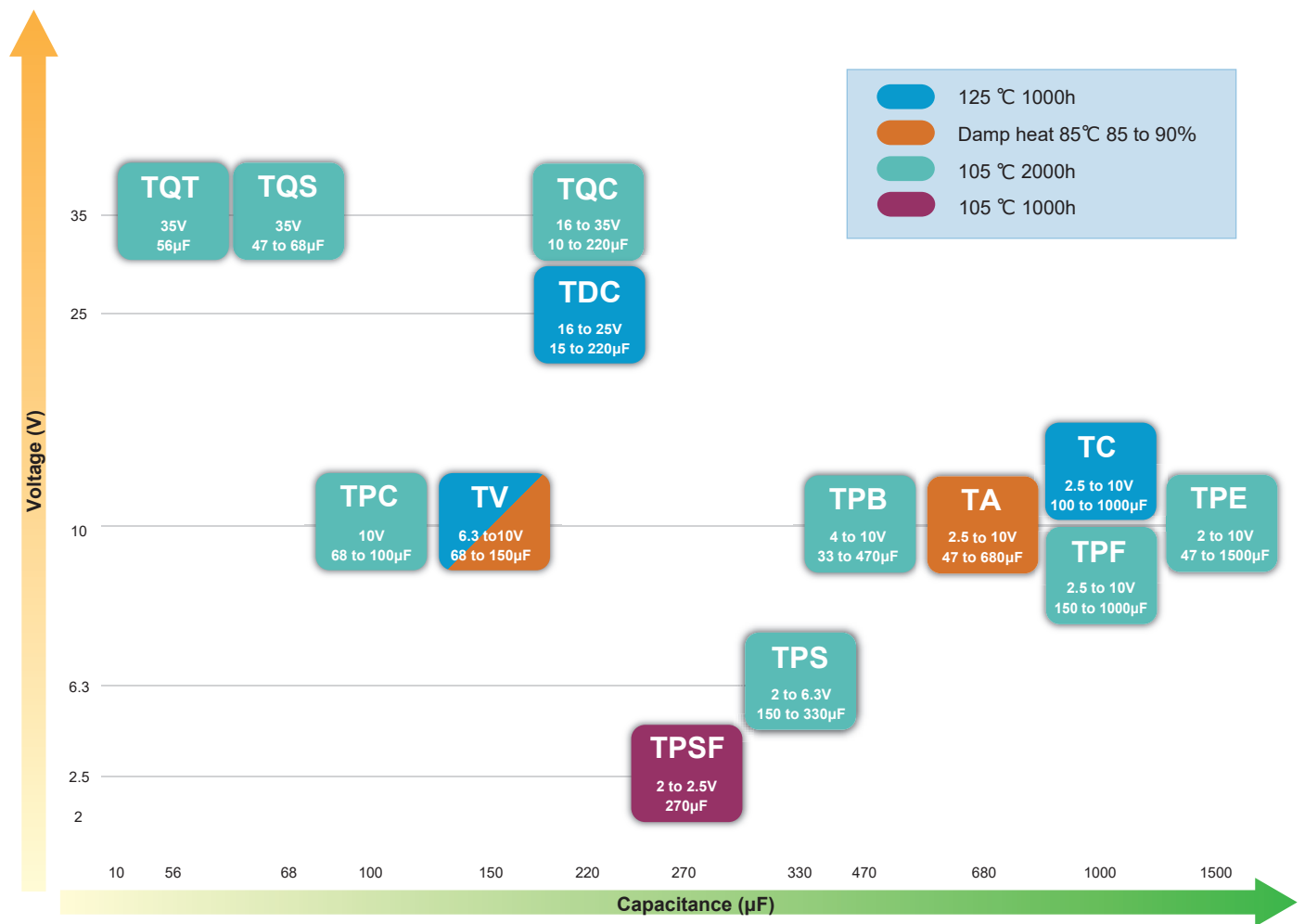
Applications

Laptop computer 	SSD/HDD 	Communications infrastructure 	Audio/Visual
Server 	Industrial robot 	Drone 	Automotive^{*1}

*1: This product is not intended for use in any driving application or any other critical functions that affect passenger safety (e.g. Powertrain, ABS, Engine ECU, Airbag, etc.)
If the intended use of TA/TV series products is for use in other automotive related applications, please contact our sales team.
All requests are subject to approval.

Main market

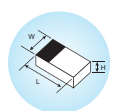
Voltage vs Capacitance



Characteristic

Series	TPS	TPSF	TPE	TPF	TQT	TQS	TQC
Warranty life ^{*1}	105 °C 2000 h	105 °C 1000 h	105 °C 1000 h	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h
Rated voltage (V)	2.5 to 6.3	2 to 2.5	2 to 10	2.5 to 10	35	35	16 to 35
Capacitance (µF)	150 to 330	270	47 to 1500	150 to 1000	56	47 to 68	10 to 220
ESR (mΩ)	30 to 35	6 to 9 ^{*4}	7 to 70 ^{*5}	5 to 35	100	100	50 to 200
Ripple current (Arms) ^{*2}	1.25 to 1.4	2.4 to 3.2	0.95 to 4.4	2.75 to 6.1	1.2 ^{*7}	1.2 ^{*7}	0.75 to 1.75 ^{*7}
DC leakage current (µA) ^{*3}	55 to 94.5	108 to 135	40 to 428.4	117.5 to 296.1	196	164.5 to 238	25 to 352
Damp heat	60 °C 90 to 95 % RH 500 h						
Size code	B1S	B2S	B2/D2E/D3L/D4	D3L/D4	D15S	D15S/D2S	B2/D15/D2/D3L

Series	TA	TV	TPB	TC	TDC	TPC
Warranty life ^{*1}	105 °C 2000 h	125 °C 1000 h	105 °C 2000 h	125 °C 1000 h	125 °C 1000 h	105 °C 2000 h
Rated voltage (V)	2.5 to 10	6.3 to 10	4 to 10	2.5 to 10	16 to 25	10
Capacitance (µF)	47 to 680	68 to 150	33 to 470	100 to 1000	15 to 220	68 to 100
ESR (mΩ)	9 to 70	25	35 to 70	5 to 25 ^{*6}	50 to 100	45 to 100
Ripple current (Arms) ^{*2}	1.1 to 3.9	2.4	1.1 to 3.0	2.4 to 6.1	0.9 to 1.8 ^{*7}	1.1 to 1.7
DC leakage current (µA) ^{*3}	40 to 220	68 to 150	20.7 to 330	60 to 428.4	60 to 250	68 to 100
Damp heat	85 °C 85 to 90 % RH 500 h		60 °C 90 to 95 % RH 500 h			
Size code	B2/D2E/D3L	D2E/D3L	B2/D3L/D4	B2/D2E/D3L/D4	B2/D2/D3L	D2



Size list L x W x H (mm)

B1	7.3 x 2.8 x 1.1	B2	7.3 x 2.8 x 1.9	D15	7.3 x 4.3 x 1.4	D2E	7.3 x 4.3 x 1.8	D3L	7.3 x 4.3 x 2.8
B1S	7.3 x 2.8 x 1.1	B2S	7.3 x 2.8 x 1.9	D15S	7.3 x 4.3 x 1.4	D2	7.3 x 4.3 x 1.9	D4	7.3 x 4.3 x 3.8
						D2S	7.3 x 4.3 x 1.9		

* 1: For details, please refer to the characteristics of each series.
 * 2: 100 kHz / 45 °C
 * 3: After 5 minutes
 * 4: 6 mΩ / 500 kHz, 9 mΩ / 300 kHz
 * 5: 9.11, 15 mΩ / 300 kHz version available
 * 6: 9 mΩ / 300 kHz version available
 * 7: 100 kHz / 105 °C