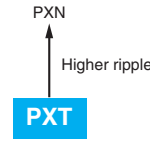


# NPCAP™-PXT Series

- Super low ESR, impedance and high heat resistance have been obtained by using conductive polymer as electrolyte.
- High moisture resistance, Bias Humidity: 1,000 hours at 85°C, 85%RH
- Rated voltage range: 2.5 to 16V<sub>dc</sub>, Capacitance range: 100 to 820μF
- Case size range : φ 5x5.8L to φ 6.3x7.7L
- Suitable for DC-DC converters, voltage regulators and decoupling applications used on computer motherboards etc.
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- Halogen Free



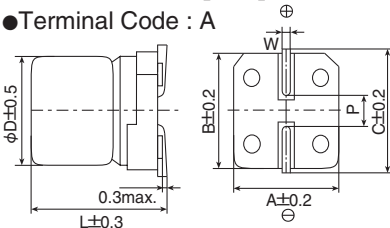
## ◆ SPECIFICATIONS

Items	Characteristics										
<b>Category</b>											
<b>Temperature Range</b>	-55 to +105°C										
<b>Rated Voltage Range</b>	2.5 to 16V <sub>dc</sub>										
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)										
<b>Surge Voltage</b>	Rated voltage × 1.15 (at 105°C)										
<b>Leakage Current</b> <small>*Note</small>	Shall not exceed values shown in STANDARD RATINGS. (at 20°C after 2 minutes)										
<b>Dissipation Factor (tan δ)</b>	0.12 max. (at 20°C, 120Hz)										
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Z(-25°C)/Z(+20°C) ≤ 1.15 Z(-55°C)/Z(+20°C) ≤ 1.25 (at 100kHz)										
<b>Endurance</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 15,000 hours at 105°C.										
	<table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance change</td><td>≤ ±20% of the initial value</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ 150% of the initial specified value</td></tr> <tr><td>ESR</td><td>≤ 150% of the initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value</td></tr> </table>	Appearance	No significant damage	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 150% of the initial specified value	ESR	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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Capacitance change	≤ ±20% of the initial value										
D.F. (tan δ)	≤ 150% of the initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
<b>Bias Humidity</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at 85°C/85% RH for 1,000 hours.										
	<table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance change</td><td>≤ ±30% of the initial value</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ 200% of the initial specified value</td></tr> <tr><td>ESR</td><td>≤ 200% of the initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value</td></tr> </table>	Appearance	No significant damage	Capacitance change	≤ ±30% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	ESR	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value
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Capacitance change	≤ ±30% of the initial value										
D.F. (tan δ)	≤ 200% of the initial specified value										
ESR	≤ 200% of the initial specified value										
Leakage current	≤ The initial specified value										
<b>Surge Voltage</b>	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor(R=1kΩ) and discharge for 5 minutes 30 seconds.										
	<table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance change</td><td>≤ ±20% of the initial value</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ 150% of the initial specified value</td></tr> <tr><td>ESR</td><td>≤ 150% of the initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value</td></tr> </table>	Appearance	No significant damage	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 150% of the initial specified value	ESR	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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Capacitance change	≤ ±20% of the initial value										
D.F. (tan δ)	≤ 150% of the initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
<b>Soldering Heat</b>	The following specifications shall be satisfied when the solder temperature is reduced back to 20°C to measure dip resistance after soldering has been performed under the recommended soldering conditions.										
	<table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance value</td><td>Within the specified tolerance range</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ The initial specified value</td></tr> <tr><td>ESR</td><td>≤ The initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value (Voltage treatment)</td></tr> </table>	Appearance	No significant damage	Capacitance value	Within the specified tolerance range	D.F. (tan δ)	≤ The initial specified value	ESR	≤ The initial specified value	Leakage current	≤ The initial specified value (Voltage treatment)
Appearance	No significant damage										
Capacitance value	Within the specified tolerance range										
D.F. (tan δ)	≤ The initial specified value										
ESR	≤ The initial specified value										
Leakage current	≤ The initial specified value (Voltage treatment)										
<b>Failure Rate</b>	0.5% per 1,000 hours maximum (Confidence level 60% at 105°C)										

\*Note : If any doubt arises, measure the leakage current after the following voltage treatment.  
Voltage treatment : DC rated voltage is applied to the capacitors for 120 minutes at 105°C.

## ◆ DIMENSIONS [mm]

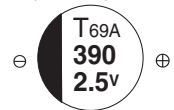
● Terminal Code : A



Size Code	φD	L	A	B	C	W	P
E61	5	5.8	5.3	5.3	5.9	0.5 to 0.8	1.4
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9
F80	6.3	7.7	6.6	6.6	7.2	0.5 to 0.8	1.9

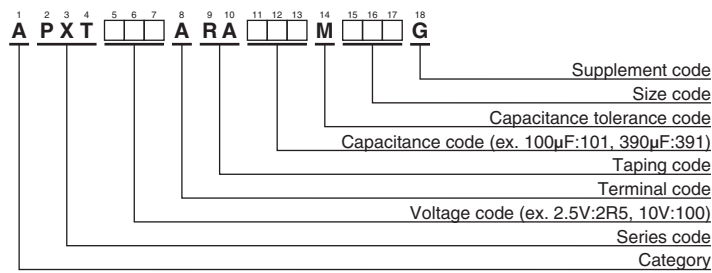
## ◆ MARKING

EX) 2.5V390μF



NPCAP™-PXT Series

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (conductive polymer type)"

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size code	Leakage current (μA max./after 2min.)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (μArms/105°C, 100kHz)	Part No.
2.5	330	E61	700	26	2,350	APXT2R5ARA331ME61G
	390	E61	700	26	2,350	APXT2R5ARA391ME61G
	390	F61	700	26	2,600	APXT2R5ARA391MF61G
	560	F61	700	26	2,600	APXT2R5ARA561MF61G
	820	F80	1,020	22	2,850	APXT2R5ARA821MF80G
4	270	E61	700	26	2,350	APXT4R0ARA271ME61G
	330	F61	700	26	2,600	APXT4R0ARA331MF61G
	390	F61	780	26	2,600	APXT4R0ARA391MF61G
	680	F80	1,360	22	2,850	APXT4R0ARA681MF80G
6.3	150	E61	700	26	2,350	APXT6R3ARA151ME61G
	220	E61	700	26	2,350	APXT6R3ARA221ME61G
	220	F61	700	26	2,600	APXT6R3ARA221MF61G
	330	F61	1,030	26	2,600	APXT6R3ARA331MF61G
	560	F80	1,760	22	2,850	APXT6R3ARA561MF80G
10	120	E61	700	45	2,000	APXT100ARA121ME61G
	220	F61	1,100	40	2,200	APXT100ARA221MF61G
	390	F80	1,950	22	2,850	APXT100ARA391MF80G
16	100	E61	800	45	2,000	APXT160ARA101ME61G
	180	F61	1,440	40	2,200	APXT160ARA181MF61G
	270	F80	2,160	22	2,850	APXT160ARA271MF80G

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency(Hz)	120	1k	10k	50k	100k to 500k
SMD type	0.05	0.30	0.55	0.70	1.00