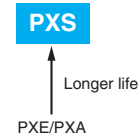


# NPCAP™-PXS Series

- Super low ESR, high ripple current capability
- Longer life (20,000 hours at 105°C)
- Rated voltage range : 4 to 16V<sub>dc</sub>, Capacitance range : 22 to 560μF
- Case size : φ5×5.8L to φ8×6.7L
- Suitable for DC-DC converters, voltage regulators and decoupling applications for computer motherboards etc.
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- Halogen Free



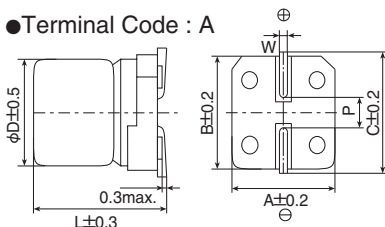
## ◆ SPECIFICATIONS

Items	Characteristics										
<b>Category</b>											
<b>Temperature Range</b>	-55 to +105°C										
<b>Rated Voltage Range</b>	4 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>	I=0.2CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V <sub>dc</sub> ) (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 20,000 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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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 60°C, 90 to 95% RH for 1,000 hours. <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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ESR	≤ 150% 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>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]<sup>o</sup>

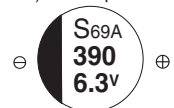
● Terminal Code : A



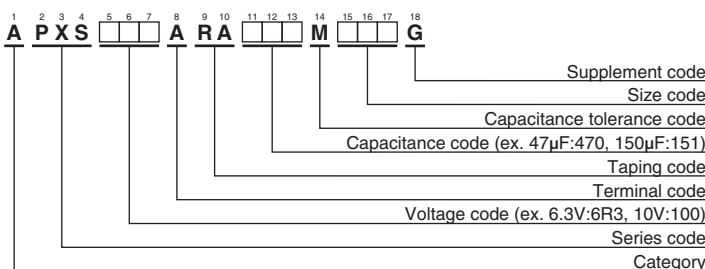
Size Code	φD	L	A	B	C	W	P
E61	5.0	5.8	5.3	5.3	5.9	0.5 to 0.8	1.4
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9
H70	8.0	6.7	8.3	8.3	9.0	0.7 to 1.1	3.1

## ◆ MARKING

EX) 6.3V390μF



## ◆ PART NUMBERING SYSTEM



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

**NPCAP™-PXS Series**
**◆STANDARD RATINGS**

WV (V <sub>dc</sub> )	Cap (μF)	Size code	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.
4	150	E61	25	2,150	APXS4R0ARA151ME61G
	560	H70	22	3,220	APXS4R0ARA561MH70G
6.3	47	E61	30	1,970	APXS6R3ARA470ME61G
	100	E61	25	2,150	APXS6R3ARA101ME61G
	120	F61	22	2,570	APXS6R3ARA121MF61G
	220	F61	22	2,570	APXS6R3ARA221MF61G
	390	H70	22	3,220	APXS6R3ARA391MH70G
10	33	E61	70	1,100	APXS100ARA330ME61G
	68	E61	30	1,970	APXS100ARA680ME61G
	120	F61	27	2,320	APXS100ARA121MF61G
	150	H70	30	2,760	APXS100ARA151MH70G
16	22	E61	90	1,060	APXS160ARA220ME61G
	39	E61	35	1,820	APXS160ARA390ME61G
	39	F61	37	2,050	APXS160ARA390MF61G
	68	F61	30	2,200	APXS160ARA680MF61G
	82	H70	30	2,760	APXS160ARA820MH70G
	120	H70	27	2,900	APXS160ARA121MH70G

**◆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