

NPCAP™-PXH Series

- Super low ESR, impedance and high heat resistance have been obtained by using conductive polymer as electrolyte.
- Suitable for DC-DC converters, voltage regulators and decoupling applications.
- Endurance with ripple current : 125°C 1000 hours
- Rated voltage range : 2.5 to 20V_{dc}, Capacitance range : 22 to 1000μF
- Case size range : φ6.3×5.7L to φ10×7.7L
- Pb-free design



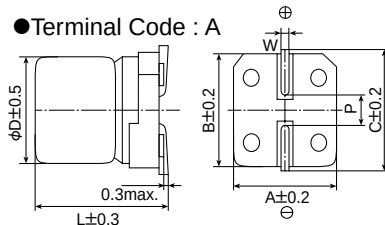
◆SPECIFICATIONS

Items	Characteristics										
Category											
Temperature Range	-55 to +125°C										
Rated Voltage Range	2.5 to 20V _{dc}										
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
Surge Voltage	Rated voltage×1.15V (at 105°C)										
Leakage Current	Shall not exceed value shown in STANDARD RATINGS. (at 20°C after 2 minutes)										
Dissipation Factor (tanδ)	0.12 max. (at 20°C, 120Hz)										
Low Temperature Characteristics (Max. Impedance Ratio)	Z(-25°C)/Z(+20°C)≤1.15 Z(-55°C)/Z(+20°C)≤1.25 (at 100kHz)										
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 125°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>DF (tanδ)</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	≤±20% of the initial value	DF (tanδ)	≤200% of the initial specified value	ESR	≤200% of the initial specified value	Leakage current	≤The initial specified value
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ESR	≤200% of the initial specified value										
Leakage current	≤The initial specified value										
Bias Humidity	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 1000 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>DF (tanδ)</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	DF (tanδ)	≤150% of the initial specified value	ESR	≤150% of the initial specified value	Leakage current	≤The initial specified value
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DF (tanδ)	≤150% of the initial specified value										
ESR	≤150% of the initial specified value										
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Surge Voltage	The capacitors shall be subjected to 1000 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>DF (tanδ)</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	DF (tanδ)	≤150% of the initial specified value	ESR	≤150% of the initial specified value	Leakage current	≤The initial specified value
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DF (tanδ)	≤150% of the initial specified value										
ESR	≤150% of the initial specified value										
Leakage current	≤The initial specified value										
Failure Rate	1% per 1000 hours maximum (Confidence level 60%)										

*Note : If any doubt arises, measure the leakage current after following voltage treatment.
Voltage treatment : DC rated voltage are applied to the capacitors for 120 minutes at 125°C.

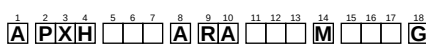
◆DIMENSIONS [mm]

● Terminal Code : A



Size code	φD	L	A	B	C	W	P
F60	6.3	5.7	6.6	6.6	7.2	0.5 to 0.8	1.9
H70	8	6.7	8.3	8.3	9.0	0.7 to 1.1	3.1
J80	10	7.7	10.3	10.3	11.0	0.7 to 1.1	4.5

◆PART NUMBERING SYSTEM



Supplement code
Size code
Capacitance tolerance code
Capacitance code (ex. 10μF:100,100μF:101)
Taping code
Terminal code
Voltage code (ex. 6.3V:6R3,10V:100)
Series code
Category

Please refer to "A guide to global code (conductive polymer type)"

◆MARKING

EX) PXH20VC22MF60



◆STANDARD RATINGS

WV(Vdc)	Cap(μF)	Size code	Leakage current (μAmax/after 2min.)	ESR (mΩmax/20°C, 100k to 300kHz)	Rated ripple current (mA _{rms} /100k to 300kHz)		Part No.
					-55°C to +105°C	+105°C to +125°C	
2.5	220	F60	110	35	2500	770	APXH2R5ARA221MF60G
	560	H70	280	30	3100	960	APXH2R5ARA561MH70G
	1000	J80	500	25	3700	1100	APXH2R5ARA102MJ80G
4	150	F60	120	35	2450	770	APXH4R0ARA151MF60G
	220	H70	176	30	3020	960	APXH4R0ARA221MH70G
	680	J80	544	25	3700	1100	APXH4R0ARA681MJ80G
6.3	82	F60	103	40	2400	720	APXH6R3ARA820MF60G
	100	F60	126	40	2400	720	APXH6R3ARA101MF60G
	150	H70	189	30	3020	960	APXH6R3ARA151MH70G
	220	H70	277	30	3020	960	APXH6R3ARA221MH70G
	470	J80	592	25	3700	1100	APXH6R3ARA471MJ80G
10	56	F60	112	45	2250	680	APXH100ARA560MF60G
	120	H70	240	35	2800	880	APXH100ARA121MH70G
	150	H70	300	35	2800	880	APXH100ARA151MH70G
	330	J80	660	30	3700	1010	APXH100ARA331MJ80G
16	39	F60	125	50	2050	650	APXH160ARA390MF60G
	82	H70	262	40	2700	830	APXH160ARA820MH70G
	150	J80	480	35	3020	930	APXH160ARA151MJ80G
	180	J80	576	35	3020	930	APXH160ARA181MJ80G
20	22	F60	88	60	1650	590	APXH200ARA220MF60G
	47	H70	188	45	2000	780	APXH200ARA470MH70G
	82	J80	328	45	2400	820	APXH200ARA820MJ80G