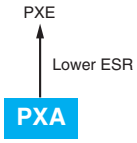
NPCAP™-PXA Series

- Super low ESR, impedance and high heat resistance have been obtained by using conductive polymer as electrolyte
- Rated voltage range : 2.5 to 25Vdc, case size range : φ5×5.8L to φ10×12.2L
- 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
Category Temperature Range	-55 to +105℃
Rated Voltage Range	2.5 to 25Vdc
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Leakage Current *Note	Shall not exceed values shown in STANDARD RATINGS. (at 20℃ after 2 minutes)
Dissipation Factor (tan δ)	0.12 max. (at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Z(-25℃)/Z(+20℃)≦1.15 Z(-55℃)/Z(+20℃)≦1.25 (at 100kHz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 15,000 hours (F46 : 3,000 hours) at 105℃.

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

Bias Humidity — The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to the DC rated voltage at 60℃, 90 to 95% RH for 1,000 hours(F46 : 500 hours).

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

Surge Voltage — The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified at 105℃ for 30 seconds through a protective resistor(R=1kΩ) and discharge for 5 minutes 30 seconds.

Rated voltage (Vdc)	2.5	4.0	6.3	10	16	20	23	25
Surge voltage (Vdc)	2.9	4.6	7.2	12	18	23	23	29

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

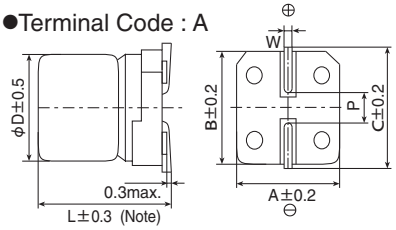
Soldering Heat — The following specifications shall be satisfied when the solder temperature is reduced back to 20°C after soldering has been performed under the recommended soldering conditions.

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)

*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℃.

◆DIMENSIONS [mm]

●Terminal Code : A



Note : $L^{+0.1}_{-0.2}$ for F46
L±0.5 for HC0 and JC0

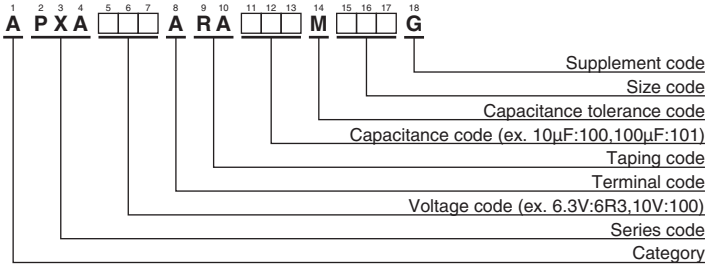
Size code	φD	L	A	B	C	W	P
E61	5	5.8	5.3	5.3	5.9	0.5 to 0.8	1.4
F46	6.3	4.5	6.6	6.6	7.2	0.5 to 0.8	1.9
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9
H70	8	6.7	8.3	8.3	9.0	0.7 to 1.1	3.1
HC0	8	12.0	8.3	8.3	9.0	0.7 to 1.1	3.1
J80	10	7.7	10.3	10.3	11.0	0.7 to 1.1	4.5
JC0	10	12.2	10.3	10.3	11.0	0.7 to 1.1	4.5

◆MARKING

EX) 16V39μF

NPCAP™-PXA Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	Leakage current (μA max./ after 2 min.)	ESR (mΩ max./ 20℃, 100k to 300kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
2.5	220	F61	110	25	2,500	APXA2R5ARA221MF61G
	560	H70	280	23	3,100	APXA2R5ARA561MH70G
	680	HC0	340	12	4,770	APXA2R5ARA681MHC0G
	1,000	J80	500	19	4,240	APXA2R5ARA102MJ80G
	1,500	JC0	750	10	5,500	APXA2R5ARA152MJC0G
4	100	F61	80.0	26	2,450	APXA4R0ARA101MF61G
	120	F46	240	38	1,710	APXA4R0ARA121MF46G
	150	E61	120	30	1,490	APXA4R0ARA151ME61G
	150	F61	120	26	2,450	APXA4R0ARA151MF61G
	220	H70	176	25	3,020	APXA4R0ARA221MH70G
	330	H70	264	25	3,020	APXA4R0ARA331MH70G
	470	J80	376	20	4,130	APXA4R0ARA471MJ80G
	560	HC0	448	12	4,770	APXA4R0ARA561MHC0G
	680	J80	544	20	4,130	APXA4R0ARA681MJ80G
	820	JC0	656	10	5,500	APXA4R0ARA821MJC0G
	1,200	JC0	960	10	5,500	APXA4R0ARA122MJC0G
6.3	47	E61	59.2	35	1,380	APXA6R3ARA470ME61G
	68	F61	85.6	27	2,400	APXA6R3ARA680MF61G
	82	F46	258	40	1,670	APXA6R3ARA820MF46G
	82	F61	103	27	2,400	APXA6R3ARA820MF61G
	100	E61	126	35	1,380	APXA6R3ARA101ME61G
	100	F46	315	40	1,670	APXA6R3ARA101MF46G
	100	F61	126	27	2,400	APXA6R3ARA101MF61G
	120	F61	151	27	2,400	APXA6R3ARA121MF61G
	150	H70	189	25	3,020	APXA6R3ARA151MH70G
	220	H70	277	25	3,020	APXA6R3ARA221MH70G
	330	J80	415	20	4,130	APXA6R3ARA331MJ80G
	390	HC0	491	12	4,770	APXA6R3ARA391MHC0G
	470	HC0	592	12	4,770	APXA6R3ARA471MHC0G
	470	J80	592	20	4,130	APXA6R3ARA471MJ80G
	680	JC0	856	10	5,500	APXA6R3ARA681MJC0G
	820	JC0	1,030	10	5,500	APXA6R3ARA821MJC0G

WV (Vdc)	Cap (μF)	Size code	Leakage current (μA max./ after 2 min.)	ESR (mΩ max./ 20℃, 100k to 300kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
10	33	E61	66.0	40	1,270	APXA100ARA330ME61G
	47	E61	94.0	40	1,270	APXA100ARA470ME61G
	47	F46	235	41	1,560	APXA100ARA470MF46G
	47	F61	94.0	31	2,250	APXA100ARA470MF61G
	56	F61	112	31	2,250	APXA100ARA560MF61G
	120	H70	240	27	2,800	APXA100ARA121MH70G
	150	H70	300	27	2,800	APXA100ARA151MH70G
	270	HC0	540	14	4,420	APXA100ARA271MHC0G
	270	J80	540	24	3,770	APXA100ARA271MJ80G
	330	HC0	660	14	4,420	APXA100ARA331MHC0G
	330	J80	660	24	3,770	APXA100ARA331MJ80G
	470	JC0	940	12	5,300	APXA100ARA471MJC0G
	560	JC0	1,120	12	5,300	APXA100ARA561MJC0G
16	22	E61	70.4	45	1,210	APXA160ARA220ME61G
	22	F46	176	45	1,490	APXA160ARA220MF46G
	33	F61	105	37	2,050	APXA160ARA330MF61G
	39	F61	124	37	2,050	APXA160ARA390MF61G
	82	H70	262	30	2,700	APXA160ARA820MH70G
	150	J80	480	26	3,430	APXA160ARA151MJ80G
	180	HC0	576	16	4,360	APXA160ARA181MHC0G
	180	J80	576	26	3,430	APXA160ARA181MJ80G
	220	JC0	704	14	5,050	APXA160ARA221MJC0G
	330	JC0	1,050	14	5,050	APXA160ARA331MJC0G
20	15	F46	150	57	1,300	APXA200ARA150MF46G
	22	F61	88.0	50	1,650	APXA200ARA220MF61G
	39	H70	156	45	2,000	APXA200ARA390MH70G
	47	H70	188	45	2,000	APXA200ARA470MH70G
	82	J80	328	40	2,500	APXA200ARA820MJ80G
	150	JC0	600	20	4,320	APXA200ARA151MJC0G
23	15	F46	172	57	1,300	APXA230ARA150MF46G
25	10	F61	125	65	1,500	APXA250ARA100MF61G
	22	H70	275	50	1,800	APXA250ARA220MH70G
	39	J80	487	45	2,100	APXA250ARA390MJ80G

◆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

■ Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.

■ Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.

■ The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.

■ The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.
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The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products

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In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

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