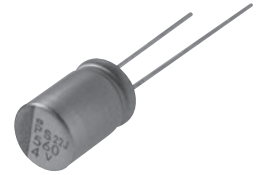
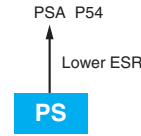


NPCAP™-PS Series

- Super low ESR, high temperature resistance
- Large capacitance & Improved high ripple current capability
- Rated voltage range : 2.5 to 35V_{dc}
- Endurance : 2,000 hours at 105°C
- Suitable for DC-DC converters, voltage regulators and decoupling applications
For computer motherboards
- RoHS Compliant



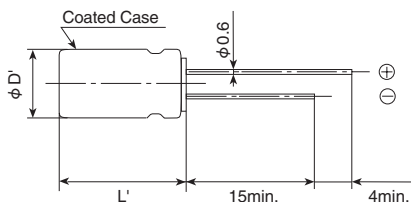
◆SPECIFICATIONS

Items	Characteristics										
Category											
Temperature Range	-55 to +105°C										
Rated Voltage Range	2.5 to 35V _{dc}										
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
Surge Voltage	Rated voltage×1.15 (at 105°C)										
Leakage Current	I=0.2CV (Rated voltage 2.5 to 25V _{dc}) / I=0.5CV (Rated voltage 35V _{dc})										
*Note	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V _{dc}) (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 2,000 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. (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	D.F. (tanδ)	≤ 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. (tanδ)	≤ 150% of the initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC 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. (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	D.F. (tanδ)	≤ 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. (tanδ)	≤ 150% of the initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
Surge Voltage Test	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. (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	D.F. (tanδ)	≤ 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. (tanδ)	≤ 150% of the initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
Failure Rate	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 : E



Size code	HB5	JC5
φ D	8	10
φ d	0.6	
F	3.5	5.0
φ D'	φ D+0.5max	
L'	L+1.5max.	

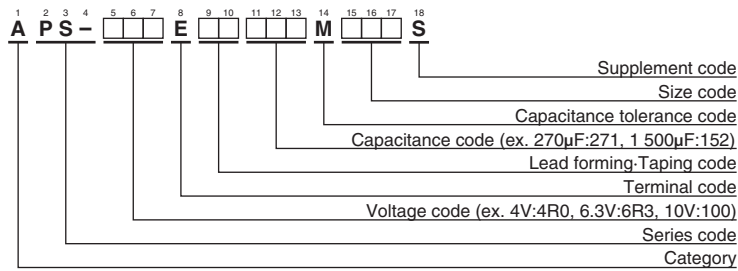
◆MARKING

EX) 4V820μF



NPCAP™-PS Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV(Vdc)	Cap(µF)	Case size φD×L(mm)	ESR (mΩmax/20°C, 100k to 300kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part No.
2.5	680	8×11.5	10	5,230	APS-2R5E□□681MHB5S
	820	8×11.5	10	5,230	APS-2R5E□□821MHB5S
	1,500	10×12.5	8	5,500	APS-2R5E□□152MJC5S
4	560	8×11.5	10	5,230	APS-4R0E□□561MHB5S
	820	10×12.5	8	5,500	APS-4R0E□□821MJC5S
	1,000	10×12.5	8	5,500	APS-4R0E□□102MJC5S
	1,200	10×12.5	8	5,500	APS-4R0E□□122MJC5S
6.3	390	8×11.5	12	4,770	APS-6R3E□□391MHB5S
	470	8×11.5	12	4,770	APS-6R3E□□471MHB5S
	680	10×12.5	10	5,500	APS-6R3E□□681MJC5S
	820	10×12.5	10	5,500	APS-6R3E□□821MJC5S
	1,000	10×12.5	10	5,500	APS-6R3E□□102MJC5S
10	270	8×11.5	14	4,420	APS-100E□□271MHB5S
	330	8×11.5	14	4,420	APS-100E□□331MHB5S
	470	10×12.5	12	5,300	APS-100E□□471MJC5S
	560	10×12.5	12	5,300	APS-100E□□561MJC5S
16	100	8×11.5	16	4,360	APS-160E□□101MHB5S
	180	8×11.5	16	4,360	APS-160E□□181MHB5S
	270	10×12.5	14	5,050	APS-160E□□271MJC5S
	330	10×12.5	14	5,050	APS-160E□□331MJC5S
20	100	8×11.5	24	3,320	APS-200E□□101MHB5S
	150	10×12.5	20	4,320	APS-200E□□151MJC5S
25	68	8×11.5	24	3,320	APS-250E□□680MHB5S
	100	10×12.5	20	4,320	APS-250E□□101MJC5S
35	18	8×11.5	34	2,830	APS-350E□□180MHB5S
	33	10×12.5	30	3,270	APS-350E□□330MJC5S

□□ : Enter the appropriate lead forming or taping code.