

NPCAP™-PSF Series

- Super low ESR, high ripple current capability
- ESR 5mΩmax. (2 to 4V_{dc})
- Longer life (20,000 hours at 105°C)
- Rated voltage range : 2 to 16V_{dc}
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- Halogen Free

PSF
Lower ESR
PSE P2-42



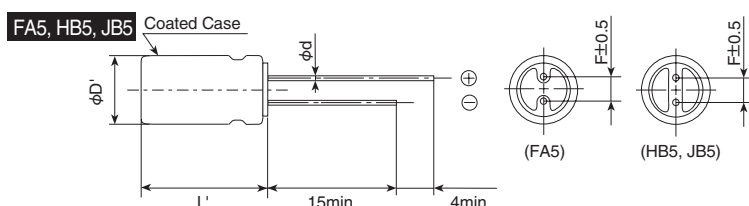
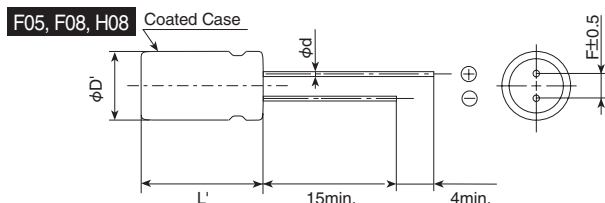
SPECIFICATIONS

Items	Characteristics										
Category											
Temperature Range	-55 to +105°C										
Rated Voltage Range	2 to 16V _{dc}										
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)										
Surge Voltage	Rated voltage(V) × 1.15 (at 105°C)										
Leakage Current	Shall not exceed values shown in STANDARD RATINGS. (at 20°C after 2 minutes)										
*Note											
Dissipation Factor (tan δ)	0.10 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 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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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. (tan δ)</td><td>≤ The initial specified value</td></tr> <tr> <td>ESR</td><td>2 to 6.3V_{dc} : ≤ The initial specified value 16V_{dc} : ≤ 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)	≤ The initial specified value	ESR	2 to 6.3V _{dc} : ≤ The initial specified value 16V _{dc} : ≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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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. (tan δ)</td><td>≤ The initial specified value</td></tr> <tr> <td>ESR</td><td>2 to 6.3V_{dc} : ≤ The initial specified value 16V_{dc} : ≤ 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)	≤ The initial specified value	ESR	2 to 6.3V _{dc} : ≤ The initial specified value 16V _{dc} : ≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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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	F05	F08	FA5	H08	HB5	JB5
φD	6.3			8.0	10.0	
φd	0.45	0.6	0.5	0.6		
F	2.5			3.5	5.0	
φD'	φD+0.5max.					
L'	L+1.0max. (Note1)	L+0.3max.	L+1.0max.	L+1.5max.		

Note1 : L+1.2 max. for 6.3V820μF

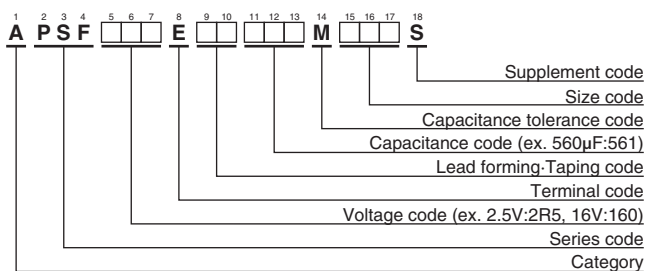
MARKING

EX) 2.5V560μF



NPCAP™-PSF Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φ D × L (mm)	Leakage current (μA max./after 2min.)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA _{rms} /105°C, 100kHz)	Part No.
2	1,000	6.3 × 8	500	5	5,900	APSF2R0E□□102MF08S
2.5	330	6.3 × 8	500	5	5,900	APSF2R5E□□331MF08S
	470	6.3 × 8	500	5	5,900	APSF2R5E□□471MF08S
	560	6.3 × 8	500	5	5,900	APSF2R5E□□561MF08S
	820	6.3 × 8	500	5	5,900	APSF2R5E□□821MF08S
	1,200	6.3 × 8	1,200	5	5,900	APSF2R5E□□122MF08S
	1,600	8 × 8	800	5	6,100	APSF2R5E□□162MF08S
4	470	6.3 × 8	500	5	5,900	APSF4R0E□□471MF08S
	560	6.3 × 8	500	5	5,900	APSF4R0E□□561MF08S
6.3	820	6.3 × 8	1,030	8	4,700	APSF6R3E□□821MF08S
16	100	6.3 × 5	500	24	2,490	APSF160E□□101MF05S
	100	6.3 × 10.5	500	25	2,820	APSF160E□□101MFA5S
	270	8 × 8	864	10	5,000	APSF160E□□271MH08S
	270	8 × 11.5	864	11	5,080	APSF160E□□271MHB5S
	330	8 × 8	1,050	13	4,700	APSF160E□□331MH08S
	470	8 × 11.5	1,500	11	5,400	APSF160E□□471MHB5S
	470	10 × 11.5	1,500	10	6,100	APSF160E□□471MJB5S

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

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency (Hz)	120	1k	10k	50k	100k to 500k
Radial lead type	0.10	0.35	0.60	0.80	1.00