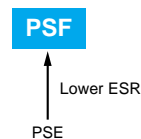


Upgrade!

NPCAP™-PSF Series

- Super low ESR, high ripple current capability
- ESR 5mΩ max. (2 & 2.5V_{dc})
- Longer life (5,000 hours at 105°C)
- ESR after endurance is specified within the initial spec (2 & 2.5V_{dc})
- Rated voltage range : 2 to 16V_{dc}
- RoHS Compliant
- Halogen Free (Ask Engineering Bulletin No797 in detail)



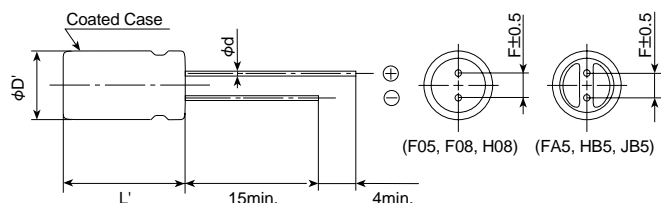
SPECIFICATIONS

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	I=0.2CV or 500μA, whichever is greater										
*Note	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)										
Dissipation Factor (tanδ)	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 5,000 hours at 105°C.										
	<table> <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>≤The initial specified value</td></tr> <tr> <td>ESR</td><td>2 & 2.5V_{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. (tanδ)	≤The initial specified value	ESR	2 & 2.5V _{dc} : ≤The initial specified value 16V _{dc} : ≤150% of the initial specified value	Leakage current	≤The initial specified value
Appearance	No significant damage										
Capacitance change	≤±20% of the initial value										
D.F. (tanδ)	≤The initial specified value										
ESR	2 & 2.5V _{dc} : ≤The initial specified value 16V _{dc} : ≤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> <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>≤The initial specified value</td></tr> <tr> <td>ESR</td><td>2 & 2.5V_{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. (tanδ)	≤The initial specified value	ESR	2 & 2.5V _{dc} : ≤The initial specified value 16V _{dc} : ≤150% of the initial specified value	Leakage current	≤The initial specified value
Appearance	No significant damage										
Capacitance change	≤±20% of the initial value										
D.F. (tanδ)	≤The initial specified value										
ESR	2 & 2.5V _{dc} : ≤The initial specified value 16V _{dc} : ≤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> <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>≤The initial specified value</td></tr> <tr> <td>ESR</td><td>2 & 2.5V_{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. (tanδ)	≤The initial specified value	ESR	2 & 2.5V _{dc} : ≤The initial specified value 16V _{dc} : ≤150% of the initial specified value	Leakage current	≤The initial specified value
Appearance	No significant damage										
Capacitance change	≤±20% of the initial value										
D.F. (tanδ)	≤The initial specified value										
ESR	2 & 2.5V _{dc} : ≤The initial specified value 16V _{dc} : ≤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]

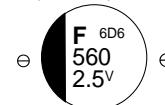
- Terminal Code : E



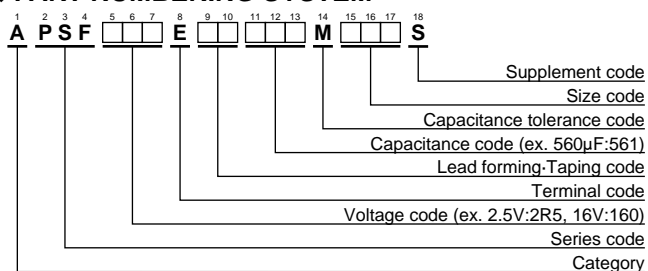
Size code	F05	F08	FA5	H08	HB5	JB5
φD	6.3	8.0	10.0			
φd	0.45	0.6	0.5	0.6		
F	2.5	3.5	5.0			
φD'	φD+0.5max.					
L'	L+1.0max.	L+0.3max.	L+1.0max.	L+1.5max.		

MARKING

EX) 2.5V560μF



◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV(Vdc)	Cap(μF)	Case size φD×L(mm)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA _{rms} /105°C, 100kHz)	Part No.
2	1,000	6.3×8	5	5,900	APSF2R0E□□102MF08S
2.5	330	6.3×8	5	5,900	APSF2R5E□□331MF08S
	470	6.3×8	5	5,900	APSF2R5E□□471MF08S
	560	6.3×8	5	5,900	APSF2R5E□□561MF08S
	820	6.3×8	5	5,900	APSF2R5E□□821MF08S
16	100	6.3×5	24	2,490	APSF160E□□101MF05S
	100	6.3×10.5	25	2,820	APSF160E□□101MFA5S
	270	8×8	10	5,000	APSF160E□□271MH08S
	270	8×11.5	11	5,080	APSF160E□□271MHB5S
	330	8×8	13	4,700	APSF160E□□331MH08S
	470	8×11.5	11	5,400	APSF160E□□471MHB5S
	470	10×11.5	10	6,100	APSF160E□□471MJB5S

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