

NPCAP™-PSG Series *Upgrade!*

- Super low ESR, high ripple current capability
- Added 35V
- Endurance: 15,000 to 20,000 hours at 105°C
- Rated voltage : 16 to 35V<sub>dc</sub>
- RoHS Compliant
- Halogen Free

PSG  
↓  
Downsized  
PSF P54



◆ SPECIFICATIONS

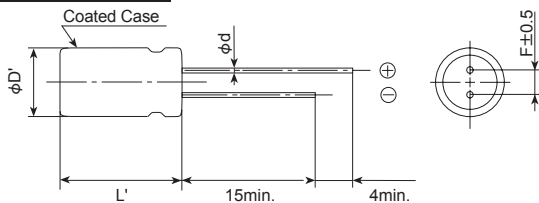
Items	Characteristics										
<b>Category</b>	-55 to +105°C										
<b>Temperature Range</b>											
<b>Rated Voltage</b>	16 to 35V <sub>dc</sub>										
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)										
<b>Surge Voltage</b>	Rated voltage(V) × 1.15 (at 105°C)										
<b>Leakage Current</b> <small>*Note</small>	I=0.2CV or 500μA, whichever is greater Where, I : Leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)										
<b>Dissipation Factor (tan δ)</b>	0.12 max. (at 20°C, 120Hz)										
<b>Low Temperature Characteristics (Max.Impedance Ratio)</b>	Z(-25°C)/Z(+20°C) ≤ 1.15 Z(-55°C)/Z(+20°C) ≤ 1.25 (at 100kHz)										
<b>Endurance</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 20,000 hours (20 to 35V : 15,000 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
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										
<b>Bias Humidity Test</b>	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>≤ 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	≤ 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. (tan δ)	≤ The initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
<b>Surge Voltage Test</b>	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>≤ 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	≤ 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. (tan δ)	≤ The initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
<b>Failure Rate</b>	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

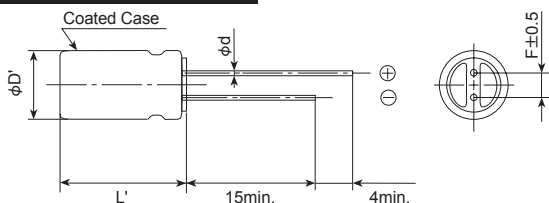
F05,F08,H06,H08



Size code	F05	F08	H06	H08	HB5	H16	H20	JB5	J16	J20
φD	6.3		8.0			10.0				
φd	0.45		0.6							
F	2.5		3.5			5.0				
φD'	φD+0.5max.									
L'	L+1.0max. (Note1)					L+1.5max.				

Note1 : L+1.2 max. for 16V270μF (Rated ripple current 5,080mArms).

HB5,H16,H20,JB5,J16,J20



◆ MARKING

EX) 16V150μF



◆PART NUMBERING SYSTEM



(Note2) : PSG series, 16V270 $\mu$ F (Rated ripple current 5,080mArms) ,16V470 $\mu$ F (Rated ripple current 5,400mArms) ,16V560 $\mu$ F (Rated ripple current 6,100mArms)have supplement code "J". Terminal and terminal plating are the same as all other in PSG series.

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

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap ( $\mu$ F)	Case size $\phi$ D $\times$ L (mm)	ESR (m $\Omega$ max./20 $^{\circ}$ C, 100k to 300kHz)	Rated ripple current (mArms/105 $^{\circ}$ C, 100kHz)	Part No.
16	150	6.3 $\times$ 5	20	3,200	APSG160E <input type="text"/> <input type="text"/> 151MF05S
	270	6.3 $\times$ 8	10	5,080	APSG160E <input type="text"/> <input type="text"/> 271MF08J
	270	6.3 $\times$ 8	15	3,800	APSG160E <input type="text"/> <input type="text"/> 271MF08S
	270	8 $\times$ 6	22	3,300	APSG160E <input type="text"/> <input type="text"/> 271MH06S
	470	8 $\times$ 8	8	5,400	APSG160E <input type="text"/> <input type="text"/> 471MH08J
	470	8 $\times$ 8	16	4,000	APSG160E <input type="text"/> <input type="text"/> 471MH08S
	560	8 $\times$ 11.5	8	6,100	APSG160E <input type="text"/> <input type="text"/> 561MHB5J
	560	8 $\times$ 11.5	14	4,970	APSG160E <input type="text"/> <input type="text"/> 561MHB5S
	820	8 $\times$ 16	8	7,000	APSG160E <input type="text"/> <input type="text"/> 821MH16S
	820	10 $\times$ 11.5	12	5,400	APSG160E <input type="text"/> <input type="text"/> 821MJB5S
	1,000	8 $\times$ 20	8	7,500	APSG160E <input type="text"/> <input type="text"/> 102MH20S
	1,000	10 $\times$ 11.5	12	5,400	APSG160E <input type="text"/> <input type="text"/> 102MJB5S
	1,200	8 $\times$ 20	8	7,500	APSG160E <input type="text"/> <input type="text"/> 122MH20S
	1,500	10 $\times$ 16	8	7,700	APSG160E <input type="text"/> <input type="text"/> 152MJ16S
1,800	10 $\times$ 20	8	8,100	APSG160E <input type="text"/> <input type="text"/> 182MJ20S	
2,200	10 $\times$ 20	8	8,100	APSG160E <input type="text"/> <input type="text"/> 222MJ20S	
20	120	6.3 $\times$ 5	20	3,200	APSG200E <input type="text"/> <input type="text"/> 121MF05S
	180	6.3 $\times$ 8	18	3,460	APSG200E <input type="text"/> <input type="text"/> 181MF08S
	330	8 $\times$ 8	17	3,880	APSG200E <input type="text"/> <input type="text"/> 331MH08S
	390	8 $\times$ 11.5	14	4,970	APSG200E <input type="text"/> <input type="text"/> 391MHB5S
	680	10 $\times$ 11.5	12	5,400	APSG200E <input type="text"/> <input type="text"/> 681MJB5S
25	56	6.3 $\times$ 5	30	2,600	APSG250E <input type="text"/> <input type="text"/> 560MF05S
	82	6.3 $\times$ 8	28	2,780	APSG250E <input type="text"/> <input type="text"/> 820MF08S
	180	8 $\times$ 8	18	3,770	APSG250E <input type="text"/> <input type="text"/> 181MH08S
	180	8 $\times$ 11.5	16	4,650	APSG250E <input type="text"/> <input type="text"/> 181MHB5S
	220	8 $\times$ 11.5	16	4,650	APSG250E <input type="text"/> <input type="text"/> 221MHB5S
	330	10 $\times$ 11.5	14	5,000	APSG250E <input type="text"/> <input type="text"/> 331MJB5S
35	390	10 $\times$ 11.5	14	5,000	APSG250E <input type="text"/> <input type="text"/> 391MJB5S
	68	8 $\times$ 11.5	18	4,380	APSG350E <input type="text"/> <input type="text"/> 680MHB5S
	120	10 $\times$ 11.5	16	4,670	APSG350E <input type="text"/> <input type="text"/> 121MJB5S

: Enter the appropriate lead forming or taping code.