

# NPCAP™-PSW Series

- Super low ESR, high ripple current capability
- Endurance: 5,000 hours at 105°C
- Rated voltage : 25V<sub>dc</sub>, Capacitance range : 180 to 820μF
- RoHS2 Compliant
- Halogen Free

PSW

↓  
Downsized  
PSG



## SPECIFICATIONS

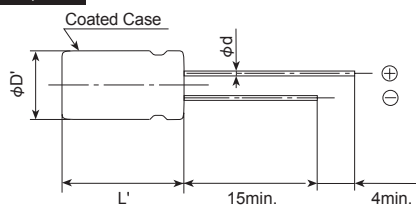
Items	Characteristics														
Category															
Temperature Range	-55 to +105°C														
Rated Voltage	25V <sub>dc</sub>														
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)														
Leakage Current	I=0.2CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)														
*Note															
Dissipation Factor (tan δ)	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 5,000 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>≤ 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				
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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>Rated voltage (V<sub>dc</sub>)</td><td>25</td></tr> <tr> <td>Surge voltage (V<sub>dc</sub>)</td><td>29</td></tr> </table> <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>	Rated voltage (V <sub>dc</sub> )	25	Surge voltage (V <sub>dc</sub> )	29	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
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Leakage current	≤ The initial specified value														

\*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]

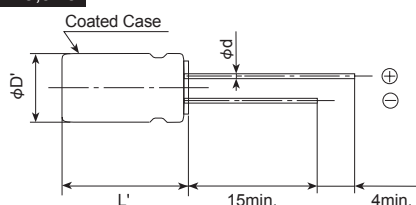
- Terminal Code : E

F08,H08



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

HB5,JB5



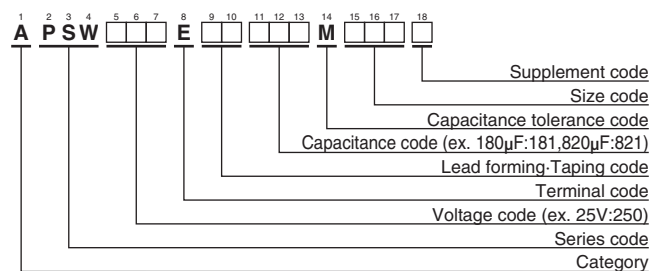
## MARKING

EX) 25V180μF



NPCAP™-PSW Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L (mm)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.
25	180	6.3×8	28	2,780	APSW250E□□181MF08S
	330	8×8	18	3,770	APSW250E□□331MH08S
	470	8×11.5	16	4,650	APSW250E□□471MHB5S
	820	10×11.5	14	5,000	APSW250E□□821MJB5S

□□ : 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