



# PSA SERIES

Computer grade, Large capacitor

## ■ Features

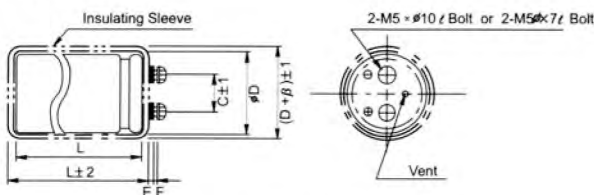
- Screw terminal type
- Smaller dimensions and large capacity
- Ideal for inverter, computer
- Large allowable ripple current
- Load life of 2000 hours at 85°C



## ■ Specifications

Item	Performance Characteristics				
<b>Operating temperature range</b>	10V ~ 250V : -40°C ~ +85°C, 315 ~ 450V : -25°C ~ +85°C				
<b>Rated working voltage range</b>	10V ~ 450V				
<b>Nominal capacitance range</b>	270 $\mu$ F ~ 680000 $\mu$ F, $\pm$ 20%(at 20°C, 120Hz)				
<b>D.C Leakage current(at 20°C)</b>	The following specifications shall be satisfied when the rated voltage is applied for the required time. $I \leq 0.02CV(\mu A)$ or 5mA (5 min), whichever is less. Where I =Leakage current( $\mu A$ ) C=Nominal capacitance( $\mu F$ ) V=Rated voltage(V)				
<b>Tan <math>\delta</math> (max., at 20°C, 120Hz)</b>	W.V(V)	Tan $\delta$			
	10	0.8 until 50000 $\mu$ F			
	16	0.7 until 50000 $\mu$ F			
	25 ~ 35 DAEWOO / PARTSNIC	0.5 until 50000 $\mu$ F			
	50 ~ 100	0.3 until 30000 $\mu$ F			
	160 ~ 250	0.15 until 10000 $\mu$ F			
	315 ~ 450	0.20 until 10000 $\mu$ F			
	when capacitance is over 10000 $\mu$ F, Tan $\delta$ shall be added 0.025 to the listed value with increase of every each 10000 $\mu$ F				
<b>Characteristics at low temperature(max.) (impedance ratio at 120Hz)</b>	W.V(V)	10~16	25~100	160~250	315~450
	Z-25°C/Z20°C	4	3	3	8
	Z-40°C/Z20°C	12	6	8	—
<b>Load life</b>	After applying rated working voltage for 2000hours at +85°C and then being stabilized at +20°C, capacitors shall meet following limits.				
	Capacitance change	Within $\pm$ 15% of the initial measured value			
	Tan $\delta$	$\leq$ 175% of the initial specified value			
	Leakage current	$\leq$ The initial specified value			
<b>Shelf life</b>	After storage for 1000hours at + 85°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.				
	Capacitance change	Within $\pm$ 15% of the initial measured value			
	Tan $\delta$	$\leq$ 175% of the initial specified value			
	Leakage current	$\leq$ The initial specified value			

## ■ Dimensions



$\phi D$	C	E	F	$\beta$
35	12.7	2.5	6.0	1.0
51	22.0	2.5	6.0	1.5
63.5	28.6	2.5	6.0	1.5
76	31.0	1.5	6.5	1.5
89	31.0	1.5	6.5	1.5

## ■ Ripple current coefficient

### • Frequency

W.V(V) \ Freq(Hz)	50	120	400	1K	10K
10-100	0.8	1.0	1.1	1.2	1.3
160-450	0.8	1.0	1.2	1.3	1.4

### • Temperature

W.V(V) \ Temp	20°C	40°C	70°C	85°C
10-100	3.00	2.40	1.45	1.0
160-450	3.30	2.65	1.65	1.0



# PSA SERIES

## Standard Ratings of PSA Series

φ DxD(mm)

W.V(V) Cap(μF)	10(1A)		16(1C)		25(1E)		35(1V)		50(1H)		63(1J)		80(1K)		100(2A)				
	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>			
3300															35x50	3.0			
3900															35x60	3.4			
4700															35x70	3.8			
5600													35x50	3.3	35x80	4.2			
6800												35x50	3.1	35x60	3.7	35x90	4.5		
8200												35x60	3.7	35x70	4.3	35x110	5.0		
10000									35x60	3.9				35x70	4.2	35x80	4.9	35x120	5.5
12000							35x50	3.4	35x70	4.4				35x80	5.0	35x90	5.6	51x70	6.2
15000							35x60	4.0	35x80	5.4				35x90	5.8	35x110	6.5	51x80	7.4
18000					35x50	4.8	35x70	4.6	35x90	5.9			35x100	6.4	51x70	7.5	51x90	8.6	
22000					35x60	5.5	35x80	5.5	35x100	6.4			35x120	7.2	51x80	8.2	51x100	11.0	
27000			35x50	4.2	35x70	6.4	35x90	6.2	35x120	7.7			51x80	8.4	51x100	9.6	51x120	12.4	
33000			35x60	5.0	35x80	7.2	35x100	7.2	51x70	8.2			51x80	9.2	51x110	10.4	63.5x100	14.0	
39000			35x60	5.5	35x90	8.4	35x110	8.0	51x80	9.4			51x100	10.0	51x120	11.2	63.5x120	15.6	
47000	35x50	4.6	35x70	6.4	35x100	9.4	51x80	8.8	51x90	10.5			51x120	11.5	63.5x100	12.0	63.5x140	16.8	
56000	35x60	5.4	35x80	7.0	35x110	10.2	51x90	9.6	51x100	11.4			63.5x90	12.6	63.5x120	13.8	76x120	18.2	
68000	35x70	6.2	35x90	8.0	35x120	10.8	51x100	11.0	51x120	12.8			63.5x100	14.6	63.5x130	15.6	76x140	21.0	
82000	35x80	7.4	35x100	9.1	51x80	12.2	51x110	12.2	63.5x100	13.9			63.5x130	16.8	76x120	18.0			
100000	35x90	8.0	35x120	10.5	51x100	13.5	51x120	13.6	63.5x120	14.8			63.5x140	17.4	76x130	21.3			
120000	35x100	9.2	51x80	11.2	51x120	14.2	63.5x100	14.8	63.5x140	16.0			76x130	20.0	89x130	23.6			
150000	51x80	10.2	51x90	12.0	51x120	15.0	63.5x120	15.6	76x120	18.2			76x140	22.0					
180000	51x90	12.0	51x110	13.5	63.5x100	16.2	63.5x140	17.2	76x140	20.2			89x140	24.2					
220000	51x100	13.2	51x120	14.6	63.5x120	17.6	76x130	19.0	89x140	22.4									
270000	63.5x80	13.6	63.5x100	15.5	76x100	18.5	89x120	20.4											
330000	63.5x90	15.0	63.5x110	17.1	76x120	20.5	89x140	22.5											
390000	63.5x100	16.3	76x100	18.4	76x140	22.1													
470000	63.5x110	17.0	76x120	19.5	89x140	23.0													
560000	76x100	18.2	76x130	20.5															
680000	76x120	20.5																	

W.V(V) Cap(μF)	160(2C)		180(2S)		200(2D)		250(2E)		315(2F)		350(2V)		400(2G)		450(2W)		
	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	SIZE	I <sub>r</sub>	
270														35x50	1.4	35x50	1.4
330														35x60	1.6	35x60	1.6
390												35x50	1.7	35x70	1.9	35x70	1.8
470										35x50	1.2	35x60	1.9	35x80	2.2	35x80	2.0
560										35x60	1.4	35x70	2.2	35x90	2.5	35x100	2.4
680							35x50	1.6	35x70	1.7	35x80	2.5	35x100	2.8	35x120	2.8	
820							35x60	2.0	35x80	1.9	35x90	3.0	35x110	3.3	51x70	3.0	
1000			35x50	2.2	35x50	2.4	35x70	2.4	35x90	2.2	35x100	3.4	51x70	3.5	51x80	3.8	
1200			35x60	2.7	36x60	2.8	35x80	2.7	35x100	2.6	35x120	4.0	51x90	4.4	51x100	4.4	
1500			35x70	3.1	35x70	3.4	35x100	3.3	35x110	3.2	51x80	4.6	51x100	5.0	51x110	5.2	
1800			35x80	3.6	35x80	4.0	35x120	4.0	35x120	4.0	51x90	5.2	51x110	5.6	51x130	5.7	
2200	35x80	4.0	35x90	4.2	35x100	4.6	51x80	4.8	51x80	4.8	51x110	6.0	51x130	6.5	63.5x110	6.6	
2700	35x100	5.0	35x100	5.0	35x120	5.0	51x90	5.5	51x100	5.8	51x120	6.7	63.5x110	7.6	63.5x130	7.8	
3300	35x120	6.2	51x70	5.8	51x80	5.6	51x100	6.2	51x120	7.0	63.5x100	8.0	63.5x130	9.0	76x110	8.6	
3900	51x70	6.8	51x80	6.8	51x90	6.4	51x120	7.0	63.5x100	8.0	63.5x120	9.0	63.5x140	9.8	76x130	10.0	
4700	51x80	7.6	51x90	7.6	51x100	7.2	63.5x100	8.1	63.5x110	9.2	76x100	9.9	76x130	11.5	76x140	11.4	
5600	51x90	8.6	51x110	8.6	51x120	8.2	63.5x110	9.2	63.5x120	10.4	76x120	12.0	76x140	12.6	89x120	12.4	
6800	51x100	9.8	51x120	9.4	63.5x90	9.0	63.5x120	10.2	76x100	11.2	76x130	13.5	89x120	13.8	89x140	14.6	
8200	51x120	11.0	63.5x100	10.6	63.5x100	10.4	76x100	11.4	76x120	12.8	89x120	14.8	89x140	15.6			
10000	63.5x100	12.4	63.5x120	11.5	63.5x120	11.6	76x120	12.5	89x120	15.0	89x140	16.4					
12000	63.5x120	13.6	76x100	13.2	76x100	12.9	76x140	14.0	89x140	17.2							
15000	76x100	15.0	76x120	15.4	76x120	14.0	89x140	16.4									
18000	76x120	16.8	89x120	16.9	76x140	15.6											
22000	76x140	18.6	89x140	19.0													
27000	89x120	21.2															
33000	89x140	23.8															

I<sub>r</sub>: Max. permissible ripple current [A(rms) at 85°C, 120Hz]

Special



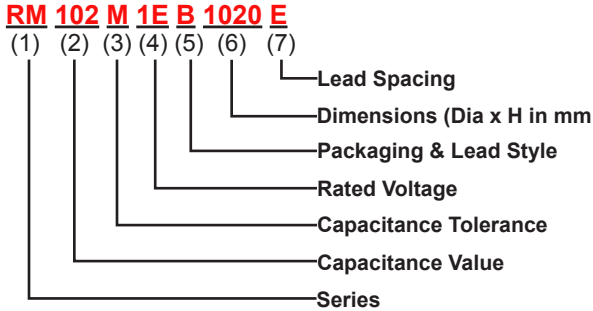
# ORDERING INFORMATION for Leaded Type



Daewoo Components Corp.

## Through-Hole Part Numbering System Example:

**RM** = Leaded Radial 85°C Miniature Series, **102** = 1000µF, **M** =20% Tolerance, **1E** 25 Volts, **B** = Bulk,  
**1020** = Case size (Dia x H) = 10.0 x 20.0mm, **E** = 5.0mm



### (1) Series

See Quick Guide on page 2  
Example: RSS, RM, RMU,...

### (2) Capacitance Value Code

Capacitance expressed in micro Farads (µF)  
First two digits are significant figures  
Third digit denotes the number of zeros  
Use R for decimal point for values less than 10µF

#### Examples:

CODE	Capacitance
R10	0.1 µF
R68	0.68 µF
1R0	1.0 µF
100	10 µF
680	68 µF
471	470 µF
102	1000 µF
103	10000 µF

### (3) Capacitance Tolerance Code

CODE	Cap. Tol.	CODE	Cap. Tol.
J	±5%	V	-10% ~ +20%
K	±10%	Q	-10% ~ +30%
M	±20%	T	-10% ~ +50%
R	+20%, -0%		

### (4) Rated Voltage Code

CODE	Voltage	CODE	Voltage
0G	4.0V	2C	160V
0J	6.3V	2S	180V
1A	10V	2D	200V
1C	16V	2E	250V
1E	25V	2F	315V
1V	35V	2V	350V
1H	50V	2G	400V
1J	63V	2W	450V
1K	80V	3Z	1000V
2A	100V		

### (5) Packaging Form & Lead Style Code ( see page 7, 8, 9 for details)

	Code	Packaging Form & Lead Style
Bulk	<b>B</b>	Bulk: Standard Package
	<b>L</b>	Bulk: 4 -8ø Long Leads Formed to 5 mm Pitch
Snap-In	<b>1</b>	10-13ø Snap-in Cut 5.0mm
	<b>2</b>	16-13ø Snap-in Cut 5.0mm
	<b>3</b>	10-13ø Snap-in Cut 4.5mm
	<b>4</b>	16-18ø Snap-in Cut 4.5mm
	<b>5</b>	4-8ø Snap-in Cut 7.5mm
Form	<b>F</b>	4-8ø Forming Cut 6.5mm
	<b>G</b>	4-8ø Forming Cut 10.0mm
Straight Cut	<b>C</b>	4-18ø Straight Cut 4.0mm
	<b>6</b>	4-18ø Straight Cut 3.1mm
	<b>7</b>	4-18ø Straight Cut 5.0mm
	<b>8</b>	4-18ø Straight Cut 6.35mm
Ammo Tape (+) Leading	<b>A</b>	4-8ø Straight Ammo
		Detail Ranges: 4-6.3ø; F=2.5mm 8ø; F=3.5mm
		4-8ø Form Tape & Ammo 5mm Pitch
		10ø Straight Ammo Tape 5mm Pitch
		13ø Straight Ammo Tape 5mm Pitch
16-18ø Straight Ammo Tape 5mm Pitch		
Tape & Reel (+) Leading	<b>T</b>	4-8ø Straight Ammo
		Detail Ranges: 4-6.3ø; F=2.5mm 8ø; F=3.5mm
		4-13ø Form Tape & Reel 5mm Pitch
		10-13ø Straight Reel Tape 5mm Pitch

NOTE: Standard Pack Anode(+) Lead Leading FEEDS OFF FIRST  
Special Option Cathode(-) Lead Leading available upon request  
Standard Packages: B = Bulk, A = Ammo, T = Tape & Reel

### (6) Example Dimension Code (Diameter x Height in mm)

Size Code	Diameter	Height	Size Code	Diameter	Height
0405	4	5	1320	13	20
0407	4	7	1631	16	31.5
0505	5	5	1835	18	35.5
0507	5	7	2240	22	40
0607	6.3	7	2545	25	45
0511	5	11	3035	30	35
0605	6	5	3500	35	100
0611	6.3	11	3501	35	110
0805	8	5	5102	51	120
0811	8	11	6303	63.5	130
1012	10	12.5	7604	76	140
1220	12.5	20	8904	89	140

### (7) Lead Spacing Code (LS)

Code	X	A	B	C	D	E	J	F
LS	1.0	1.5	2.0	2.5	3.5	5.0	7.0	7.5
Code	K	M	G	P	H	Q	R	S
LS	8.0	10.0	10.5	12.0	12.5	12.8	15.0	16.0
Code	T	U	V	W	Y	Z		
LS	20.0	21.7	28.3	30.0	31.6	32		