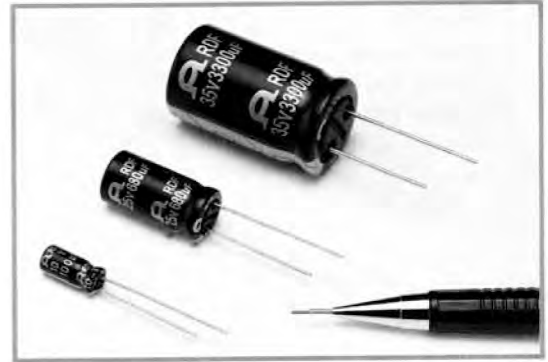


RDF SERIES

Low Z, Standard, Radial Leads

Features

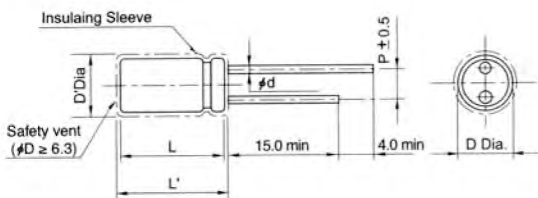
- Standard, Radial(Smaller than RMF)
- Low ESR, Low impedance
- Large permissible ripple current
- Load life of 2000 hours at 105°C



Specifications

Item	Performance Characteristics						
Operating temperature range	-55°C ~ +105°C						
Rated working voltage range	6.3V ~ 50V						
Nominal capacitance range	2.2μF ~ 10000μF, ±20% (at 20°C, 120Hz)						
D.C Leakage current(at 20°C)	The following specifications shall be satisfied when the rated voltage is applied for the required time. $I \leq 0.03CV(1 \text{ min})$ or $4\mu A$, whichever is greater $I \leq 0.01CV(2 \text{ min})$ or $3\mu A$, whichever is greater Where I =Leakage current(μA) C =Nominal capacitance(μF) V =Rated voltage(V)						
Tan δ (max., at 20°C, 120Hz)	W.V(V)	6.3	10	16	25	35	50
	Tan δ	0.22	0.19	0.16	0.14	0.12	0.10
When capacitance is over 1000μF, Tan δ shall be added 0.02 to the listed value with increase of every each 1000μF							
Characteristics at low temperature (max.) (impedance ratio at 120Hz)	W.V(V)	6.3~10		16	25~50		
	Z-55°C/Z20°C	3		2	2		
Load life	After applying rated working voltage for 2000 hours at +105°C and then being stabilized at +20°C, capacitors shall meet following limits.						
	Capacitance change	Within ± 20% of the initial measured value					
	Tan δ	≤ 200% of the initial specified value					
	Leakage current	≤ The initial specified value					
Shelf life	After storage for 1000 hours at + 105°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.						
	Capacitance change	Within ± 20% of the initial measured value					
	Tan δ	≤ 150% of the initial specified value					
	Leakage current	≤ 200% of the initial specified value					

Dimensions



Standard lead style

φD	5.0	6.3	8.0	10.0	12.5	16.0	18.0
P	2.0	2.5	3.5	5.0		7.5	
φd	0.5			0.6		0.8	

$D' = [D + 0.5]$ Max.

$L' = [L + 1.0]$ Max. at $D \leq 8.0$

$L' = [L + 1.5]$ Max. at $D \geq 10.0$

Ripple current coefficient

Frequency

W.V(V)	Freq(Hz)	50	120	300	1K	10-100K
6.3~16	50	0.54	0.70	0.85	0.95	1.0
	120	0.43	0.57	0.73	0.88	1.0
50	50	0.39	0.55	0.71	0.86	1.0

Temperature

Temperature	≤ 45°C	65°C	85°C	105°C
Factor	2.4	2.2	1.7	1.0

RDF SERIES

Standard Ratings [Dimensions, Impedance, Ripple Current]

 ϕ D x L(mm)

Cap(μ F)	W.V(V)	6.3(0J)			10(1A)			16(1C)		
		SIZE	Z	I _r	SIZE	Z	I _r	SIZE	Z	I _r
10							5 x 11	2.20	70	
22					5 x 11	1.60	97	5 x 11	1.60	108
33		5 x 11	1.60	107	5 x 11	1.60	120	5 x 11	1.60	127
47		5 x 11	1.60	129	5 x 11	1.60	140	5 x 11	1.60	168
68		5 x 11	1.60	148	5 x 11	1.60	160	5 x 11	1.60	189
100		5 x 11	1.60	172	5 x 11	1.60	189	6.3 x 11	0.78	238
220		6.3 x 11	0.78	290	6.3 x 11	0.78	324	8 x 11.5	0.38	415
330		6.3 x 11	0.78	355	8 x 11.5	0.38	465	8 x 11.5	0.38	508
470		8 x 11.5	0.38	504	8 x 11.5	0.38	556	10 x 12.5	0.30	704
680		10 x 12.5	0.30	650	10 x 16	0.22	750	10 x 16	0.22	926
1000		10 x 12.5	0.30	850	10 x 16	0.22	820	10 x 20	0.16	1225
2200		12.5 x 20	0.12	1140	12.5 x 20	0.12	1238	12.5 x 25	0.080	1435
3300		12.5 x 20	0.080	1330	12.5 x 25	0.080	1560	16 x 25	0.070	1830
4700		16 x 25	0.070	1840	16 x 25	0.070	1996			
6800		16 x 25	0.055	2050	16 x 31.5	0.055	2370			
10000		16 x 31.5	0.050	2468						

Cap(μ F)	W.V(V)	25(1E)			35(1V)			50(1H)		
		SIZE	Z	I _r	SIZE	Z	I _r	SIZE	Z	I _r
2.2							5 x 11	5.00	63	
3.3							5 x 11	4.30	77	
4.7		5 x 11	4.0	62	5 x 11	3.80	87	5 x 11	3.80	92
6.8		5 x 11	3.2	70	5 x 11	3.20	106	5 x 11	3.20	110
10		5 x 11	2.2	80	5 x 11	2.20	125	5 x 11	2.20	135
22		5 x 11	1.6	114	5 x 11	1.60	159	5 x 11	1.60	172
33		5 x 11	1.6	156	5 x 11	1.60	178	6.3 x 11	0.78	220
47		5 x 11	1.6	188	6.3 x 11	0.78	230	6.3 x 11	0.78	264
68		6.3 x 11	0.78	216	6.3 x 11	0.78	273	8 x 11.5	0.38	375
100		6.3 x 11	0.78	262	8 x 11.5	0.38	328	8 x 11.5	0.38	378
220		8 x 11.5	0.38	457	10 x 12.5	0.30	564	10 x 16	0.22	715
330		10 x 12.5	0.30	652	10 x 16	0.22	756	10 x 20	0.16	1030
470		10 x 16	0.22	850	10 x 20	0.16	985	12.5 x 20	0.12	1335
680		10 x 20	0.18	950	12.5 x 20	0.12	1125	12.5 x 25	0.080	1696
1000		12.5 x 20	0.12	1145	12.5 x 25	0.080	1367	16 x 25	0.070	1750
2200		16 x 25	0.070	1704	16 x 31.5	0.055	1945			
3300		16 x 31.5	0.055	2130	18 x 35.5	0.050	2485			

I_r : Maximum permissible ripple current[mA(rms) at 105°C, 100KHz]Z : Max. Impedance[Ω at 20°C, 100KHz]

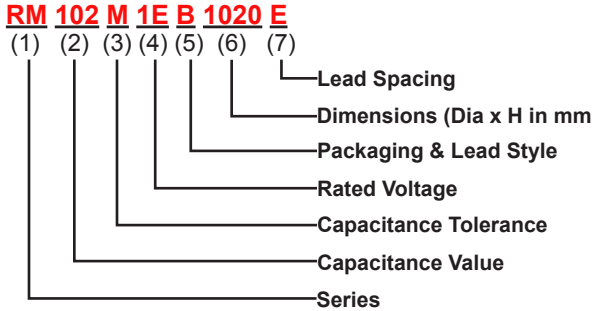
ORDERING INFORMATION for Leaded Type



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	Bulk: Standard Package
	L	Bulk: 4 -8ø Long Leads Formed to 5 mm Pitch
Snap-In	1	10-13ø Snap-in Cut 5.0mm
	2	16-13ø Snap-in Cut 5.0mm
	3	10-13ø Snap-in Cut 4.5mm
	4	16-18ø Snap-in Cut 4.5mm
	5	4-8ø Snap-in Cut 7.5mm
Form	F	4-8ø Forming Cut 6.5mm
	G	4-8ø Forming Cut 10.0mm
Straight Cut	C	4-18ø Straight Cut 4.0mm
	6	4-18ø Straight Cut 3.1mm
	7	4-18ø Straight Cut 5.0mm
	8	4-18ø Straight Cut 6.35mm
Ammo Tape (+) Leading	A	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	T	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		