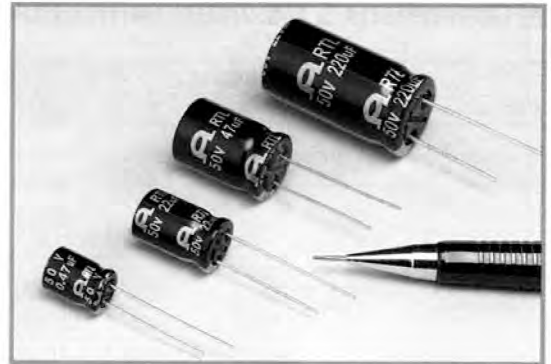


RTL SERIES

Superior in Reliability, Radial Leads

Features

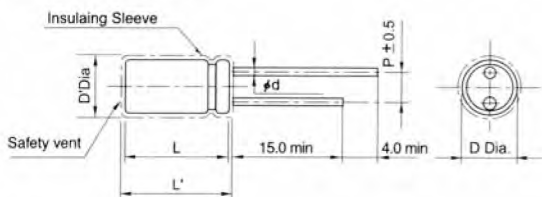
- Extended Operating temperature range
(-40°C ~ +125°C)
Radial (Equivalent to 16000 hours life at 85°C)
- very low leakage current
- Low impedance value at high frequency
- Low dissipation factor



Specifications

Item	Performance Characteristics						
Operating temperature range	-40°C ~ +125°C						
Rated working voltage range	10V ~ 250V						
Nominal capacitance range	0.47μF ~ 1000μF, -10%~+50%(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. $I = 0.002CV$ or $2\mu A$ (5 min) at 10~100V, whichever is greater $I = 0.002CV + 10\mu A$ (5 min) at 160~250V Where I =Leakage current(μA) C=Nominal capacitance(μF) V=Rated voltage(V)						
Tan δ (max., at 20°C, 120Hz)	W.V(V)	10	16	25	35	50~100	160~250
	Tan δ	0.20	0.17	0.17	0.12	0.10	0.20
Characteristics at low temperature(max.) (impedance ratio at 120Hz)	W.V(V)	10	16	25	35~100	50~100	160~250
	Z-25°C/Z20°C	2	2	2	2	2	2
Load life	Z-40°C/Z20°C	8	6	5	4	4	4
	After applying rated working voltage for 1000 hours at +125°C and then being stabilized at +20°C, capacitors shall meet following limits.						
Capacitance change	Within ± 15% of the initial measured value						
Tan δ	≤ 150% of the initial specified value						
Leakage current	≤ The initial specified value						
Shelf life	After storage for 1000 hours at +125°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.						
	Capacitance change	Within ± 15% 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	8.0	10.0	12.5	16.0	18.0
p	3.5	5.0		7.5	
φd		0.6		0.8	

D' = [D+0.5]Max.

L' = [L+1.0]Max. at D ≤ 8.0

L' = [L+1.5]Max. at D ≥ 10.0

Ripple current coefficient

Frequency

Cap(μF) \ Freq(Hz)	50	120	400	1K	10K	50-100K
Cap ≤ 10	0.8	1.0	1.30	1.45	1.65	1.70
10 < Cap ≤ 100	0.8	1.0	1.23	1.36	1.48	1.53
100 < Cap ≤ 1000	0.8	1.0	1.16	1.25	1.35	1.38

Temperature

Temperature	≤ 85°C	105°C	125°C
Factor	2.0	1.4	1.0



RTL SERIES

▣ Dimensions & Maximum permissible ripple current

φ D x L(mm)

Cap(μF)	W.V	10(1A)		16(1C)		25(1E)		35(1V)		50(1H)	
		SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r
0.47										8 x 11.5	11
1.0										8 x 11.5	17
2.2										8 x 11.5	25
3.3										8 x 11.5	31
4.7										8 x 11.5	37
10										8 x 11.5	59
22								8 x 11.5	99	10 x 16	102
33						8 x 11.5	101			10 x 20	172
47				8 x 11.5	136			10 x 16	187	12.5 x 20	240
100		8 x 16	176			10 x 20	300			12.5 x 25	351
220				12.5 x 20	473	12.5 x 25	513	16 x 25	590	16 x 31.5	633
330		12.5 x 20	488	12.5 x 25	576	16 x 25	720	16 x 31.5	776		
470		12.5 x 25	576	16 x 25	790	16 x 31.5	924	16 x 35.5	1040		
1000		16 x 31.5	1034								

Cap(μF)	W.V	63(1J)		100(2A)		160(2C)		200(2D)		250(2E)	
		SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r
0.47		8 x 11.5	11								
1.0		8 x 11.5	17			8 x 11.5	20			10 x 16	30
2.2		8 x 11.5	25	8 x 16	32			10 x 16	38	10 x 20	45
3.3		8 x 11.5	31	10 x 16	39	10 x 16	43	10 x 20	54	10 x 20	67
4.7		8 x 11.5	37	10 x 16	51	10 x 20	60	10 x 20	75	12.5 x 25	93
10		8 x 11.5	59	10 x 20	94	12.5 x 20	110	12.5 x 25	130	16 x 25	155
22		10 x 16	102	12.5 x 25	178	16 x 25	185	16 x 31.5	200		
33		10 x 20	172	16 x 25	246	16 x 35.5	250				
47		12.5 x 20	240	16 x 31.5	336						
100		12.5 x 25	351								
220		16 x 31.5	633								

I_r : Maximum permissible ripple current[mA(rms) at 125°C,120Hz]

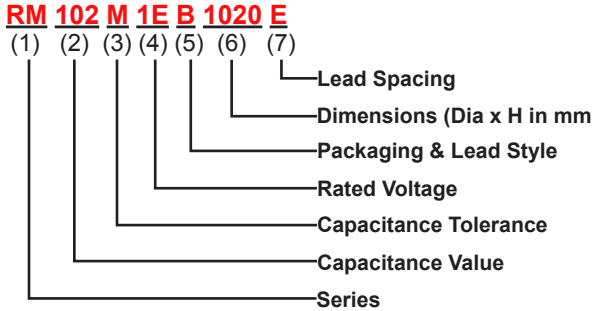
ORDERING INFORMATION for Leaded Type



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		