

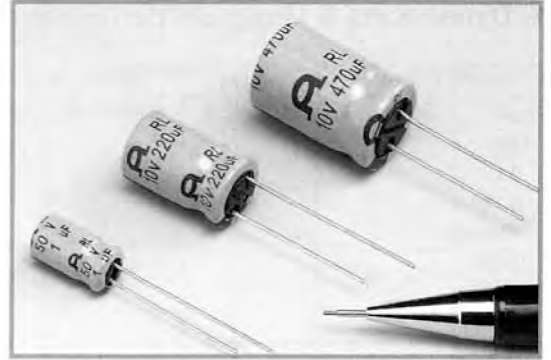


RL SERIES

Low Leakage, Radial Leads

Features

- Low leakage current, Radial
- Excellent shelf performance
- Close tolerance and low cost
- Load life of 2000 hours at 85°C

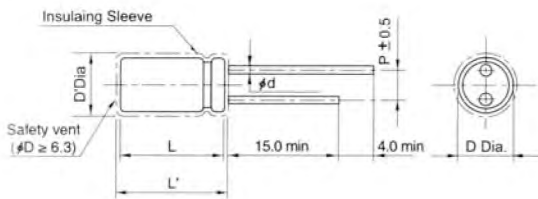


Specifications

Item	Performance Characteristics							
Operating temperature range	-40°C ~ +85°C							
Rated working voltage range	6.3V ~ 100V							
Nominal capacitance range	0.1μF ~ 2200μF, ±20% or ±10% (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. $I \leq 0.002CV$ or $0.4\mu A(2 \text{ min})$, 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	50~80	100
	Tan δ	0.22	0.19	0.16	0.14	0.12	0.12	0.08
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	35	50~100	
	Z-25°C/Z20°C	4	3	2	2	2	2	
	Z-40°C/Z20°C	8	6	4	4	4	4	
Load life	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 ± 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 +85°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 initial specified value						
	Leakage current	≤ 0.002CV + 1μA(2min)						

Low LC

Dimensions



• Standard lead style

φD	5.0	6.3	8.0	10.0	12.5	16.0
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≤8.0

L'=[L+1.5]Max. at D≥10.0



RL SERIES

■ Dimensions & Maximum permissible ripple current [mA(rms) at 85°C, 120Hz]

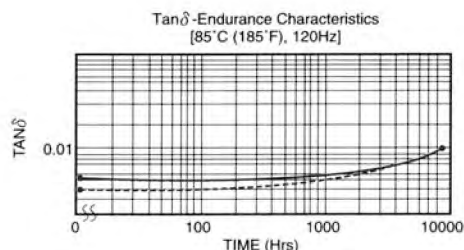
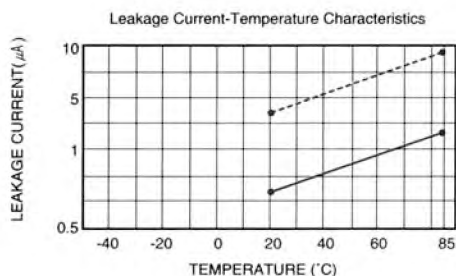
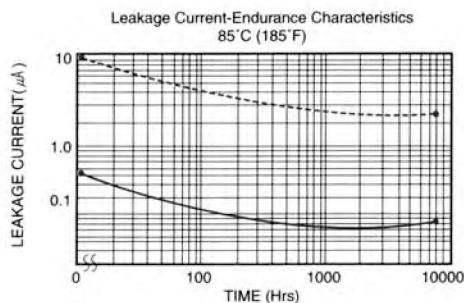
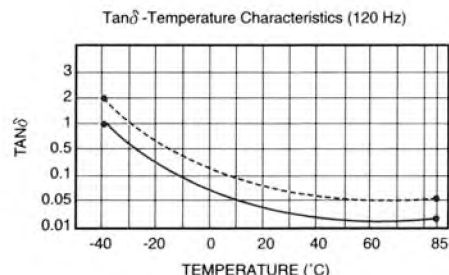
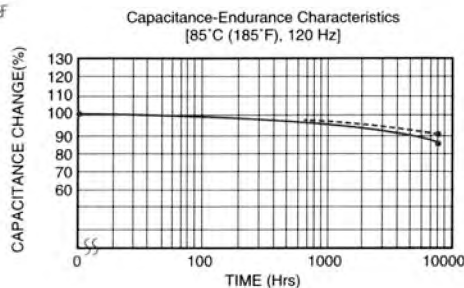
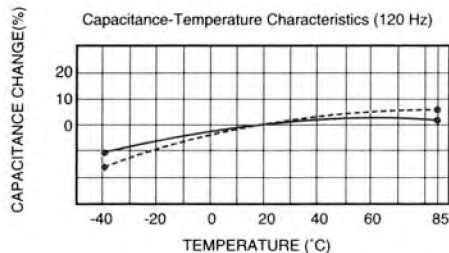
w.v(V) Cap(μF)	6.3(0J)		10(1A)		16(1C)		25(1E)		35(1V)		50(1H)		63(1J)		80(1K)		100(2A)	
	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r	SIZE	I _r
0.1											5x11	4	5x11	4	5x11	4	5x11	4
0.22											5x11	6	5x11	6	5x11	6	5x11	6
0.33											5x11	7	5x11	7	5x11	7	5x11	7
0.47											5x11	9	5x11	9	5x11	9	5x11	9
0.68											5x11	12	5x11	12	5x11	12	5x11	14
1.0											5x11	15	5x11	15	5x11	17	5x11	17
2.2											5x11	21	5x11	21	5x11	27	63x11	28
3.3											5x11	30	63x11	31	63x11	44	8x11.5	45
4.7							5x11	35	5x11	35	63x11	35	63x11	50	63x11	50	8x11.5	55
6.8							5x11	40	63x11	50	8x11.5	50	8x11.5	65	8x11.5	70	10x12.5	75
10					5x11	60	63x11	61	63x11	61	8x11.5	61	8x11.5	74	10x12.5	100	10x16	100
22			5x11	75	63x11	80	8x11.5	105	8x11.5	110	10x12.5	120	10x16	150	10x16	170	10x20	175
33			63x11	100	63x11	115	8x11.5	140	10x12.5	150	10x16	155	10x16	160	10x20	210	125x20	220
47			63x11	125	8x11.5	145	10x12.5	175	10x12.5	190	10x16	210	10x16	220	10x20	320	125x25	320
68			63x11	135	8x11.5	160	10x12.5	200	10x16	225	10x20	250	10x20	280	125x25	340	16x25	360
100			8x11.5	200	10x12.5	250	10x16	290	10x20	330	125x20	340	125x25	360	125x25	470	16x25	505
220	10x12.5	260	10x16	335	10x16	400	125x20	480	125x25	545	16x25	550	16x31.5	600	16x31.5	750		
330	10x16	340	10x20	430	10x20	480	125x25	580	16x25	630	16x31.5	680	16x35.5	760				
470	10x20	440	125x20	575	125x20	725	16x25	780	16x25	850	16x35.5	850						
680	125x20	550	125x20	700	125x25	800	16x25	850	16x31.5	900	16x35.5	900						
1000	125x25	680	125x25	1000	16x25	1050	16x31.5	1100										
2200	16x25	950	16x31.5	1100														

φD x L(mm)

I_r: Maximum permissible ripple current[mA(rms) at 85°C, 120Hz]

■ PERFORMANCE CURVES

— 25V-100 μF
- - - 16V-47 μF



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		