RD series

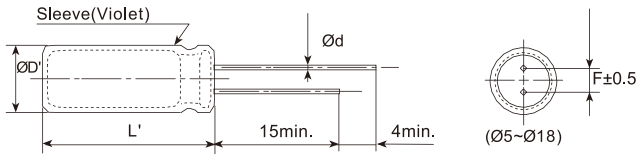
- Endurance: +105°C 2,000~5,000 hours
- High frequency and low impedance; moisture content: under 40%
- **RoHS Compliant**

SPECIFICATIONS

Items	Characteristics								
Category Temperature Range	-40~+105°C(6.3~100 Vdc)								
Rated Voltage Range	6.3~100 Vdc								
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)								
Leakage Current	I≤0.01CV or 3μA, whichever is greater. Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V) (at 20°C after 2 minutes)								
Dissipation Factor (tanδ)	Rated Voltage(Vdc)	6.3	10	16	25	35	50	63	100
	tanδ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C,120Hz)								
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(Vdc)	6.3	10	16	25	35	50	63	100
	Z(-25°C)/Z(+20°C)	4	3	2	2	2			
	Z(-40°C)/Z(+20°C)	8	6	4	3	3			(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after DC voltage plus the rated ripple current is applied for a specified period of time at 105 °C.								
	Capacitance Change	≤±25% of the initial value							
	D.F. (tanδ)	≤200% of the initial specified value							
	Leakage Current	≤The initial specified value							
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied.								
	Capacitance Change	≤±25% of the initial value							
	D.F. (tanδ)	≤200% of the initial specified value							
	Leakage Current	≤200% of the initial specified value							

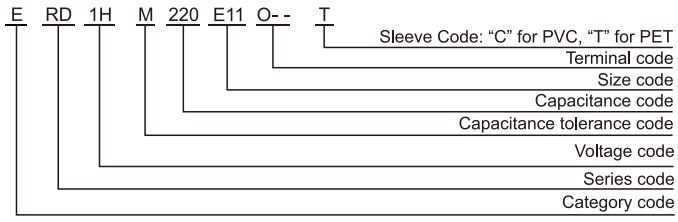
Dia.	Load life (hours)
ØD≤6.3	2,000
ØD=8	3,000
ØD≥10	5,000

DIMENSIONS[mm]



ØD	5	6.3	8		10	12.5	16	18
Ød	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5		5.0	5.0	7.5	7.5
ØD'	ØD+0.5max.							
L'	L+2max.							

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Freq.(Hz) / Cap.(μF)	120	1k	10k	100k
Cap.<220	0.40	0.75	0.90	1.00
220≤Cap.<680	0.50	0.85	0.94	1.00
680≤Cap.<2200	0.60	0.87	0.95	1.00
2200≤Cap.<4700	0.75	0.90	0.95	1.00
Cap.≥4700	0.85	0.95	0.98	1.00

The endurance of capacitors is shortened with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

RD series

■ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size ΦDxL(mm)	tanδ	Impedance (Ωmax/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)
6.3(0J)	100	5*11	0.22	1.00	170
	120	5*11	0.22	0.92	175
	150	6.3*11	0.22	0.81	220
	180	6.3*11	0.22	0.76	210
	220	6.3*11	0.22	0.65	310
	270	6.3*11	0.22	0.54	320
	330	8*11	0.22	0.42	390
	470	8*11	0.22	0.25	450
	560	8*11	0.22	0.23	490
	680	8*11	0.22	0.21	520
	820	8*16	0.22	0.20	620
	1000	10*12.5	0.22	0.17	750
	1200	10*16	0.22	0.16	860
	1500	10*16	0.22	0.14	1100
	1800	10*20	0.22	0.11	1250
	2200	10*25	0.24	0.095	1470
	2700	12.5*20	0.24	0.075	1500
	3300	12.5*20	0.26	0.036	1650
	4700	12.5*30	0.28	0.036	2100
	5600	12.5*30	0.30	0.034	2340
	6800	16*25	0.32	0.032	2450
	8200	16*30	0.36	0.027	2650
	10000	16*35	0.40	0.024	2700
	15000	18*35	0.50	0.023	2950
10(1A)	22	5*11	0.19	2.70	98
	33	5*11	0.19	2.60	100
	47	5*11	0.19	1.34	150
	56	5*11	0.19	1.23	160
	68	5*11	0.19	1.05	170
	100	5*11	0.19	0.80	210
	120	6.3*11	0.19	0.75	250
	150	6.3*11	0.19	0.61	290
	180	6.3*11	0.19	0,46	320
	220	6.3*11	0.19	0.35	340
	270	8*11	0.19	0.30	400
	330	8*11	0.19	0.27	460
	470	8*11	0.19	0.25	580
	560	10*12.5	0.19	0.16	635
	680	10*12.5	0.19	0.11	765
	820	10*16	0.19	0.10	890
	1000	10*16	0.19	0.076	1040
	1200	10*16	0.19	0.067	1200
	1500	10*20	0.19	0.062	1400
	1800	10*25	0.19	0.058	1550
	2200	12.5*20	0.21	0.041	1750
	2700	12.5*20	0.21	0.035	1900
	3300	12.5*25	0.23	0.031	2000
	4700	16*25	0.25	0.030	2100
	5600	16*25	0.27	0.028	2290
	6800	16*30	0.29	0.026	2650
	8200	16*35	0.33	0.026	2770
	10000	18*35	0.37	0.024	2580
16(1C)	10	5*11	0.16	4.7	74
	22	5*11	0.16	2.6	100
	33	5*11	0.16	2.0	114
	47	5*11	0.16	1.1	155

WV (Vdc)	Cap (μF)	Size ΦDxL(mm)	tanδ	Impedance (Ωmax/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)
16(1C)	56	5*11	0.16	0.82	180
	68	5*11	0.16	0.69	195
	100	6.3*11	0.16	0.50	265
	120	6.3*11	0.16	0.47	270
	150	6.3*11	0.16	0.41	290
	180	8*11	0.16	0.34	370
	220	8*11	0.16	0.25	480
	270	8*11	0.16	0.21	520
	330	8*12	0.16	0.156	290
	470	10*12.5	0.16	0.124	750
	560	10*12.5	0.16	0.105	785
	680	10*16	0.16	0.092	1100
	820	10*16	0.16	0.078	1140
	1000	10*20	0.16	0.065	1350
	1200	10*25	0.16	0.061	1500
	1500	12.5*20	0.16	0.060	1380
	1800	12.5*20	0.16	0.047	1800
	2200	12.5*25	0.18	0.038	2000
	2700	12.5*25	0.18	0.033	2450
	3300	16*25	0.20	0.030	2790
	4700	16*30	0.22	0.026	2880
	5600	16*35	0.24	0.025	2990
	6800	18*35	0.26	0.024	3200
	8200	18*35	0.30	0.024	3320
	10000	18*40	0.34	0.024	3550
25(1E)	4.7	5*11	0.14	3.95	68
	5.6	5*11	0.14	3.25	75
	6.8	5*11	0.14	2.98	80
	10	5*11	0.14	2.56	85
	22	5*11	0.14	1.95	125
	33	5*11	0.14	1.42	155
	47	6.3*11	0.14	1.00	220
	56	6.3*11	0.14	0.79	250
	68	6.3*11	0.14	0.65	280
	100	6.3*11	0.14	0.35	370
	120	6.3*11	0.14	0.33	380
	150	8*11	0.14	0.31	410
	180	8*11	0.14	0.25	455
	220	8*11	0.14	0.15	550
	270	10*12.5	0.14	0.125	720
	330	10*12.5	0.14	0.114	820
	470	10*16	0.14	0.076	1200
	560	10*16	0.14	0.072	1250
	680	10*20	0.14	0.065	1320
	820	10*25	0.14	0.052	1530
	1000	12.5*20	0.14	0.045	1650
	1200	12.5*25	0.14	0.041	1980
	1500	12.5*25	0.14	0.038	2210
	1800	16*25	0.14	0.032	2510
	2200	16*25	0.16	0.036	2650
	2700	16*25	0.16	0.031	2820
	3300	16*30	0.18	0.026	3240
	4700	16*35	0.20	0.024	3650
	5600	18*35	0.22	0.024	3720
	6800	18*40	0.24	0.024	3850