

RR SERIES

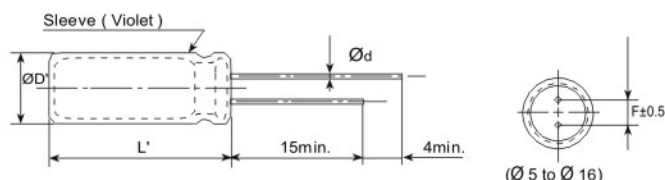
- High frequency, low impedance, high reliability
- Lifetime +105°C 2,000 hours
- Suitable for switching power, UPS, power sources etc.
- RoHS Compliant



◆ SPECIFICATIONS

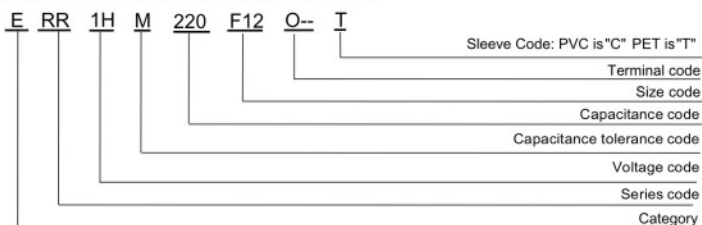
Items	Characteristics						
Category							
Temperature Range	-40 to +105°C						
Rated Voltage Range	6.3 to 50V _{dc}						
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)						
Leakage Current	Is0.01 CV or 3μA whichever is greater Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 1 minutes)						
Dissipation Factor (tanδ)	Rated voltage (V _{dc})	6.3	10	16	25	35	50
	tanδ (Max.)	0.22	0.18	0.14	0.12	0.10	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 (V _{dc})	6.3	10	16	25	35	50
	Z(-25°C)/Z(+20°C)	2					
	Z(-40°C)/Z(+20°C)	3 (at , 120Hz)					
Endurance	The following specification shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 2000hours at 105°C						
	Capacitance change	≤±20% of the initial value(6.3V, 10V: ≤±30%)					
	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 1000 hours at 105°C without voltage applied.						
	Capacitance change	≤±20% of the initial value(6.3V, 10V: ≤±30%)					
	D.F. (tanδ)	≤200% of the initial specified value					
	Leakage current	≤200% The initial specified value					

◆ DIMENSIONS [mm]



Ø D	5	6.3	8	10	12.5	16
Ø d	0.5	0.5	0.5	0.6	0.6	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5
Ø D'	Ø D+0.5max.					
L'	L+2max.					

◆ PART NUMBERING SYSTEM



※ Sleeve Code and Terminal Code should follow the part number system

◆ RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Freq. (Hz)	50/60	120	1K	10K	100K
Cap(µF)					
22 to 33	0.45	0.55	0.75	0.90	1.00
47 to 330	0.60	0.70	0.85	0.95	1.00
390 to 1000	0.65	0.75	0.90	0.98	1.00
1200 to 6800	0.75	0.80	0.95	1.00	1.00

The endurance of capacitors is shorted 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.

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◆ STANDARD RATINGS (Impedance : at 20°C/100KHz / Ω_{max} , Ripple current : mArms/ 105°C 100KHz)

WV (Vdc)	Cap (μ F)	Case size Φ DxL(mm)	$\tan\delta$	Impedance (Ω_{max})	Ripple current (mArms)
6.3(0J)	150	5×11.5	0.22	0.3	250
	330	6.3×11.5	0.22	0.13	405
	560	8×12	0.22	0.072	760
	820	8×16	0.22	0.056	995
	1000	10×12.5	0.22	0.053	1030
	1200	8×20 10×16	0.22	0.041 0.038	1250 1430
	1500	10×20	0.22	0.023	1820
	2200	10×25	0.24	0.022	2150
	3300	12.5×20	0.26	0.021	2360
	3900	12.5×25	0.26	0.018	2770
	4700	12.5×30	0.28	0.016	3290
	5600	12.5×35 16×20	0.30	0.015 0.018	3400 3140
	6800	16×25	0.32	0.016	3460
10(1A)	100	5×11.5	0.18	0.30	250
	220	6.3×11.5	0.18	0.13	405
	470	8×12	0.18	0.072	760
	680	8×16 10×12.5	0.18	0.056 0.053	995 1030
	1000	8×20 10×16	0.18	0.041 0.038	1250 1430
	1200	10×20	0.18	0.023	1820
	1500	10×25	0.18	0.022	2150
	2200	12.5×20	0.20	0.021	2360
	3300	12.5×25	0.22	0.018	2770
	3900	12.5×30 16×20	0.22	0.016 0.018	3290 3140
	4700	12.5×35	0.24	0.015	3400
	5600	16×25	0.26	0.016	3460
16(1C)	56	5×11.5	0.14	0.30	250
	120	6.3×11.5	0.14	0.13	405
	330	8×12	0.14	0.072	760
	470	8×16 10×12.5	0.14	0.056 0.053	795 1030
	680	8×20 10×16	0.14	0.041 0.038	1250 1430
	1000	10×20	0.14	0.023	1820
	1200	10×25	0.14	0.022	2150
	1500	12.5×20	0.14	0.021	2360
	2200	12.5×25	0.16	0.018	2770
	2700	12.5×30 16×20	0.16	0.016 0.018	3290 3140
	3300	12.5×35	0.18	0.015	3400
	3900	16×25	0.18	0.016	3460

WV (Vdc)	Cap (μ F)	Case size Φ DxL(mm)	$\tan\delta$	Impedance (Ω_{max})	Ripple current (mArms)
25(1E)	47	5×11.5	0.12	0.3	250
	100	6.3×11.5	0.12	0.13	405
	220	8×12	0.12	0.072	760
	330	8×16	0.12	0.056	995
	470	8×20	0.12	0.041	1250
	680	10×12.5	0.12	0.053	1030
	820	10×16	0.12	0.038	1430
	1000	10×20	0.12	0.023	1820
	1500	10×25	0.12	0.022	2150
	1800	12.5×20 12.5×30 16×20	0.12	0.021 0.016 0.018	2360 3290 3140
	2200	12.5×25 12.5×35	0.14	0.018 0.015	2770 3400
	2700	16×25	0.14	0.016	3460
35(1V)	33	5×11.5	0.10	0.3	250
	56	6.3×11.5	0.10	0.13	405
	150	8×12	0.10	0.072	760
	220	8×16 10×12.5	0.10	0.056 0.053	995 1030
	270	8×20	0.10	0.041	1250
	330	10×16	0.10	0.038	1430
	470	10×20	0.10	0.023	1820
	560	10×25	0.10	0.022	2150
	680	12.5×20	0.10	0.021	2360
	1000	12.5×25	0.10	0.018	2770
	1200	12.5×30 16×20	0.10	0.016 0.018	3290 3140
	1500	12.5×35	0.10	0.015	3400
	1800	16×25	0.10	0.016	3460
50(1H)	22	5×11.5	0.08	0.34	238
	56	6.3×11.5	0.08	0.14	385
	100	8×12	0.08	0.074	724
	120	8×16	0.08	0.061	950
	150	10×12.5	0.08	0.061	979
	180	8×20	0.08	0.046	1190
	220	10×16	0.08	0.042	1370
	270	10×20	0.08	0.030	1580
	330	10×25	0.08	0.028	1870
	470	12.5×20	0.08	0.027	2050
	560	12.5×25	0.08	0.023	2410
	680	12.5×30	0.08	0.021	2860
	820	12.5×35 16×20	0.08	0.019 0.023	2960 2730
	1000	16×25	0.08	0.021	3010