

# RR series

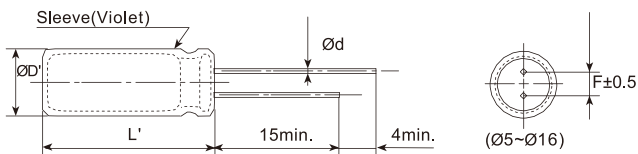
- High frequency, low impedance, high reliability
- Endurance: +105°C 2,000 hours
- Suitable for switching power, UPS, power sources, etc.
- RoHS Compliant



## SPECIFICATIONS

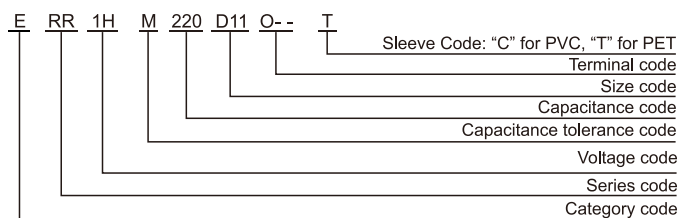
Items	Characteristics	
Category Temperature Range	-40~+105°C	
Rated Voltage Range	6.3~50 V <sub>dc</sub>	
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)	
Leakage Current	I ≤ 0.01CV or 3μA, whichever is greater. Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage (V) (at 20°C after 2 minutes)	
Dissipation Factor (tanδ)	Rated Voltage (V <sub>dc</sub> )	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 <sub>dc</sub> )	6.3 10 16 25 35 50
	Z(-25°C)/Z(+20°C)	2 (at 120Hz)
Endurance	The specifications listed below shall be met when the capacitors are restored to 20°C after DC voltage plus rated ripple current is applied for 2,000 hours at 105 °C.	
	Capacitance Change	≤±20% of the initial value (6.3, 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 leaving them under no load at 105°C for 1,000 hours.	
	Capacitance Change	≤±20% of the initial value (6.3, 10V: ≤±30%)
	D.F. (tanδ)	≤200% of the initial specified value
	Leakage Current	≤200% of the initial specified value

## DIMENSIONS [mm]



ØD	5	6.3	8	10	12.5	16
Ød	0.45	0.5	0.5	0.6	0.6	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5
ØD'	ØD+0.5max.					
L'	L+2max.					

## PART NUMBERING SYSTEM



## RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Freq.(Hz)	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

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■ STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size ΦDxL(mm)	tanδ	Impedance (Ω <sub>max</sub> /20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)
6.3(0J)	150	5*11	0.22	0.3	250
		6.3*7	0.22	0.3	250
	330	6.3*9	0.22	0.15	350
		6.3*11	0.22	0.13	405
	560	8*9	0.22	0.12	605
		8*12	0.22	0.072	760
	820	8*16	0.22	0.056	995
		10*9	0.22	0.085	800
	1000	10*12.5	0.22	0.053	1030
	1200	8*20	0.22	0.041	1250
		10*16	0.22	0.038	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	0.30	0.015	3400
		16*20	0.30	0.018	3140
6800	16*25	0.32	0.016	3460	
10(1A)	100	5*7	0.18	1.38	185
		5*11	0.18	0.3	250
	220	6.3*7	0.18	0.35	405
		6.3*11	0.18	0.13	405
	470	8*9	0.18	0.18	606
		8*11	0.18	0.072	760
	680	8*16	0.18	0.056	995
		10*9	0.18	0.085	760
	1000	10*12.5	0.18	0.053	1030
		8*20	0.18	0.041	1250
	1200	10*16	0.18	0.038	1430
		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	0.22	0.016	3290
		16*20	0.22	0.018	3140
	4700	12.5*35	0.24	0.015	3400
5600	16*25	0.26	0.016	3460	
16(1C)	56	5*7	0.14	0.7	180
		5*11	0.14	0.3	250
	120	6.3*7	0.14	0.4	300
		6.3*11	0.14	0.13	405
	330	8*7	0.14	0.14	510
		8*12	0.14	0.072	760
	470	8*16	0.14	0.056	795
		10*12.5	0.14	0.053	1030
	680	8*20	0.14	0.041	1250
		10*16	0.14	0.038	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	0.16	0.016	3290
		16*20	0.16	0.018	3140
	3300	12.5*35	0.18	0.015	3400
	3900	16*25	0.18	0.016	3460

WV (V <sub>dc</sub> )	Cap (μF)	Size ΦDxL(mm)	tanδ	Impedance (Ω <sub>max</sub> /20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)
25(1E)	47	5*11	0.12	0.3	250
		6.3*7	0.12	1.1	200
	100	6.3*11	0.12	0.13	405
		8*7	0.12	0.3	430
	220	8*9	0.12	0.1	600
		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
		10*20	0.12	0.023	1820
	1500	10*25	0.12	0.022	2150
	1800	12.5*20	0.12	0.021	2360
		12.5*30	0.12	0.016	3290
	2200	16*20	0.12	0.018	3140
		12.5*25	0.14	0.018	2770
	2700	12.5*35	0.14	0.015	3400
		16*25	0.14	0.016	3460
35(1V)	33	5*7	0.10	1.15	160
		5*11	0.10	0.3	250
	56	6.3*11	0.10	0.13	405
		8*7	0.10	0.39	405
	150	8*9	0.10	0.17	600
		8*12	0.10	0.072	760
	220	8*16	0.10	0.056	995
		10*12.5	0.10	0.053	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	0.10	0.016	3290
		16*20	0.10	0.018	3140
	1500	12.5*35	0.10	0.015	3400
	1800	16*25	0.10	0.016	3460
50(1H)	22	5*11	0.08	0.34	238
		6.3*7	0.08	0.52	200
	56	6.3*12	0.08	0.14	385
		8*7	0.08	0.36	320
	100	8*9	0.08	0.2	580
		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	0.03	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	0.08	0.019	2960
		16*20	0.08	0.023	2730
	1000	16*25	0.08	0.021	3010