

RE series

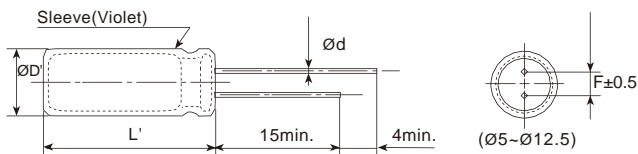
- Low impedance and high frequency.
- Endurance: +105°C 2,000–4,000 hours
- Suitable for switching power, UPS, power sources, etc.
- RoHS Compliant



SPECIFICATIONS

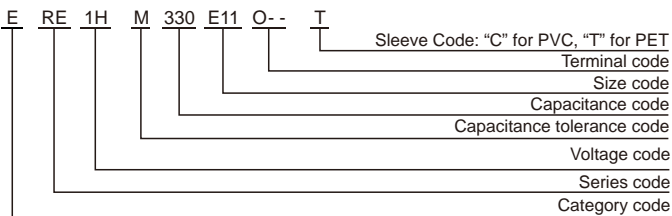
Items	Characteristics		
Category Temperature Range	-40~+105°C		
Rated Voltage Range	6.3~100 V _{dc}		
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)		
Leakage Current	I ≤ 0.01CV or 3μA, whichever is greater. Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage (V) (at 20°C after 2 minutes)		
Dissipation Factor (tan δ)	Rated Voltage(V _{dc})	6.3 10 16 25 35 50 63 100	
	tan δ (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(V _{dc})	6.3 10 16 25 35 50 63 100	
	Z(-25°C)/Z(+20°C)	4 3 2	
	Z(-40°C)/Z(+20°C)	8 6 4 3	
(at 120Hz)			
Endurance	The following specifications listed below shall be met when the capacitors are restored to 20°C after DC voltage plus rated ripple current is applied for a specified period of time at 105 °C.		
	Capacitance Change	±25% of the initial value	Case Dia.(mm) Load life (hours)
	D.F. (tan δ)	200% of the initial specified value	∅D 6.3 2,000
	Leakage Current	The initial specified value	∅D=8&10 3,000 ∅D 12.5 4,000
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	±25% of the initial value	
	D.F. (tan δ)	200% of the initial specified value	
	Leakage Current	200% of the initial specified value	

DIMENSIONS[mm]



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

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Cap.(μF) \ 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

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.

RE series

■ STANDARD RATINGS

WV (Vdc)	Cap (µF)	Size DxL(mm)	tan	Impedance (max/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part Number	
6.3(0J)	180	6.3x11	0.22	0.25	340	ERE0JM181E11OT	
		8x9	0.22	0.33	300	ERE0JM181F09OT	
	220	6.3x11	0.22	0.25	340	ERE0JM221E11OT	
		8x9	0.22	0.33	300	ERE0JM221F09OT	
	270	6.3x11	0.22	0.25	340	ERE0JM271E11OT	
		8x9	0.22	0.33	300	ERE0JM271F09OT	
	330	8x11	0.22	0.13	650	ERE0JM331F11OT	
		10x9	0.22	0.17	580	ERE0JM331G09OT	
	470	8x11	0.22	0.13	650	ERE0JM471F11OT	
		10x9	0.22	0.17	580	ERE0JM471G09OT	
	560	8x11	0.22	0.13	650	ERE0JM561F11OT	
		10x9	0.22	0.17	580	ERE0JM561G09OT	
	680	8x11	0.22	0.13	650	ERE0JM681F11OT	
		10x9	0.22	0.17	580	ERE0JM681G09OT	
	820	10x12	0.22	0.08	870	ERE0JM821G12OT	
		10x9	0.22	0.17	580	ERE0JM102G09OT	
	1000	10x12	0.22	0.08	870	ERE0JM102G12OT	
		10x12	0.22	0.08	870	ERE0JM122G12OT	
	1200	8x20	0.22	0.068	1050	ERE0JM152F20OT	
		10x16	0.22	0.060	1210	ERE0JM152G16OT	
	1800	10x20	0.22	0.045	1400	ERE0JM182G20OT	
		10x20	0.24	0.045	1400	ERE0JM222G20OT	
	2200	10x25	0.24	0.042	1650	ERE0JM272G25OT	
		12.5x20	0.24	0.035	1900	ERE0JM272W20OT	
3300	10x25	0.24	0.042	1650	ERE0JM332G25OT		
	12.5x20	0.26	0.035	1900	ERE0JM332W20OT		
3900	12.5x20	0.26	0.035	1900	ERE0JM392W20OT		
	12.5x25	0.28	0.030	2130	ERE0JM472W25OT		
10(1A)	150	6.3x11	0.19	0.25	340	ERE1AM151E11OT	
		8x9	0.19	0.33	300	ERE1AM151F09OT	
	180	6.3x11	0.19	0.25	340	ERE1AM181E11OT	
		8x9	0.19	0.33	300	ERE1AM181F09OT	
	220	6.3x11	0.19	0.25	340	ERE1AM221E11OT	
		8x9	0.19	0.33	300	ERE1AM221F09OT	
	270	8x9	0.19	0.33	300	ERE1AM271F09OT	
		10x9	0.19	0.17	580	ERE1AM271G09OT	
	330	10x9	0.19	0.17	580	ERE1AM331G09OT	
		10x9	0.19	0.17	580	ERE1AM471G09OT	
	560	10x9	0.19	0.17	580	ERE1AM561G09OT	
		680	10x9	0.19	0.17	580	ERE1AM681G09OT
	820	10x12	0.19	0.08	870	ERE1AM821G12OT	
		8x16	0.19	0.087	850	ERE1AM102F16OT	
	1000	10x16	0.19	0.060	1210	ERE1AM102G16OT	
		1200	10x20	0.19	0.045	1400	ERE1AM122G20OT
	1500	10x20	0.19	0.045	1400	ERE1AM152G20OT	
		1800	10x20	0.19	0.045	1400	ERE1AM182G20OT
	2200	10x20	0.21	0.045	1400	ERE1AM222G20OT	
		10x25	0.21	0.042	1650	ERE1AM272G25OT	
	2700	12.5x20	0.21	0.035	1900	ERE1AM272W20OT	
		12.5x25	0.23	0.030	2130	ERE1AM332W25OT	
	16(1C)	100	8x9	0.16	0.33	300	ERE1CM101F09OT
			8x9	0.16	0.33	300	ERE1CM121F09OT
150		8x9	0.16	0.33	300	ERE1CM151F09OT	
		10x9	0.16	0.33	580	ERE1CM151G09OT	
180		8x9	0.16	0.33	300	ERE1CM181F09OT	
		10x9	0.16	0.33	580	ERE1CM181G09OT	
220		8x9	0.16	0.33	300	ERE1CM221F09OT	
		10x9	0.16	0.33	580	ERE1CM221G09OT	
270		10x9	0.16	0.17	580	ERE1CM271G09OT	
		330	10x9	0.16	0.17	580	ERE1CM331G09OT
470		10x9	0.16	0.17	580	ERE1CM471G09OT	
		10x12	0.16	0.08	870	ERE1CM471G12OT	
560		10x12	0.16	0.08	870	ERE1CM561G12OT	
		8x16	0.16	0.087	850	ERE1CM681F16OT	
680		10x12	0.16	0.080	870	ERE1CM681G12OT	
		820	10x16	0.16	0.06	1210	ERE1CM821G16OT
1000		10x16	0.16	0.06	1210	ERE1CM102G16OT	
		1200	10x20	0.16	0.045	1400	ERE1CM122G20OT
1500		10x20	0.16	0.045	1400	ERE1CM152G20OT	
		1800	10x25	0.16	0.042	1650	ERE1CM182G25OT
2200		12.5x20	0.16	0.035	1900	ERE1CM182W20OT	
		12.5x20	0.18	0.035	1900	ERE1CM222W20OT	
2700		12.5x20	0.18	0.030	2130	ERE1CM272W20OT	
		25(1E)	82	6.3x11	0.14	0.25	340
8x9	0.14		0.33	300	ERE1EM820F09OT		
100	6.3x11		0.14	0.25	340	ERE1EM101E11OT	
8x9	0.14		0.33	300	ERE1EM101F09OT		

WV (Vdc)	Cap (µF)	Size DxL(mm)	tan	Impedance (max/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part Number
25(1E)	120	8x11	0.14	0.13	650	ERE1EM121F11OT
		10x9	0.14	0.17	580	ERE1EM121G09OT
	150	8x11	0.14	0.13	650	ERE1EM151F11OT
		10x9	0.14	0.17	580	ERE1EM151G09OT
	180	8x11	0.14	0.13	650	ERE1EM181F11OT
		10x9	0.14	0.17	580	ERE1EM181G09OT
	220	8x11	0.14	0.13	650	ERE1EM221F11OT
		10x9	0.14	0.17	580	ERE1EM221G09OT
	270	10x9	0.14	0.17	580	ERE1EM271G09OT
		10x12	0.14	0.08	870	ERE1EM271G12OT
	330	10x9	0.14	0.17	580	ERE1EM331G09OT
		10x12	0.14	0.08	870	ERE1EM331G12OT
	470	8x16	0.14	0.087	840	ERE1EM471F16OT
		10x12	0.14	0.080	870	ERE1EM471G12OT
	560	10x16	0.14	0.060	1210	ERE1EM561G16OT
		680	10x16	0.14	0.060	1210
	820	10x20	0.14	0.045	1400	ERE1EM821G20OT
		1000	10x20	0.14	0.045	1400
	1200	10x20	0.14	0.045	1400	ERE1EM122G20OT
		10x25	0.14	0.042	1650	ERE1EM152G25OT
	1500	12.5x20	0.14	0.035	1900	ERE1EM152W20OT
		1800	12.5x25	0.14	0.030	2130
	2200	12.5x25	0.14	0.030	2130	ERE1EM222W25OT
		35(1V)	47	6.3x11	0.12	0.25
8x9	0.12		0.33	300	ERE1VM470F09OT	
56	6.3x11		0.12	0.25	340	ERE1VM560E11OT
	8x9		0.12	0.33	300	ERE1VM560F09OT
68	6.3x11	0.12	0.25	340	ERE1VM680E11OT	
	8x9	0.12	0.33	300	ERE1VM680F09OT	
82	8x11	0.12	0.13	650	ERE1VM820F11OT	
	10x9	0.12	0.17	580	ERE1VM820G09OT	
100	8x11	0.12	0.13	650	ERE1VM101F11OT	
	10x9	0.12	0.17	580	ERE1VM101G09OT	
120	8x11	0.12	0.13	650	ERE1VM121F11OT	
	10x9	0.12	0.17	580	ERE1VM121G09OT	
150	8x11	0.12	0.13	650	ERE1VM151F11OT	
	10x9	0.12	0.17	580	ERE1VM151G09OT	
180	10x12	0.12	0.08	870	ERE1VM181G12OT	
	8x11	0.12	0.13	650	ERE1VM221F11OT	
220	10x9	0.12	0.17	580	ERE1VM221G09OT	
	8x16	0.12	0.087	840	ERE1VM221F16OT	
270	10x12	0.12	0.080	870	ERE1VM221G12OT	
	10x16	0.12	0.060	1210	ERE1VM271G16OT	
330	8x20	0.12	0.069	1050	ERE1VM331F20OT	
	10x12	0.12	0.080	870	ERE1VM331G12OT	
470	10x16	0.12	0.060	1210	ERE1VM331G16OT	
	10x16	0.12	0.060	1210	ERE1VM471G16OT	
560	10x20	0.12	0.045	1400	ERE1VM561G20OT	
	680	10x20	0.12	0.045	1400	ERE1VM681G20OT
820	10x25	0.12	0.042	1650	ERE1VM821G25OT	
	12.5x20	0.12	0.035	1900	ERE1VM821W20OT	
1000	12.5x20	0.12	0.035	1900	ERE1VM102W20OT	
	12.5x25	0.12	0.030	2130	ERE1VM102W25OT	
50(1H)	33	6.3x11	0.10	0.30	295	ERE1HM330E11OT
		8x9	0.10	0.40	260	ERE1HM330F09OT
	39	6.3x11	0.10	0.30	295	ERE1HM390E11OT
		8x9	0.10	0.40	260	ERE1HM390F09OT
	47	6.3x11	0.10	0.30	295	ERE1HM470E11OT
		8x9	0.10	0.40	260	ERE1HM470F09OT
	56	8x11	0.10	0.17	560	ERE1HM560F11OT
		10x9	0.10	0.23	500	ERE1HM560G09OT
	68	8x11	0.10	0.17	560	ERE1HM680F11OT
		10x9	0.10	0.23	500	ERE1HM680G09OT
	82	8x11	0.10	0.17	560	ERE1HM820F11OT
		10x9	0.10	0.23	500	ERE1HM820G09OT
	100	10x12	0.10	0.12	760	ERE1HM101G12OT
		8x16	0.10	0.12	730	ERE1HM121F16OT
	120	10x12	0.10	0.12	760	ERE1HM121G12OT
		10x16	0.10	0.084	1050	ERE1HM151G16OT
	150	8x20	0.10	0.090	1050	ERE1HM181F20OT
		10x16	0.10	0.084	1050	ERE1HM181G16OT
	180	10x16	0.10	0.084	1050	ERE1HM221G16OT
		10x25	0.10	0.055	1440	ERE1HM271G25OT
	220	12.5x20	0.10	0.045	1660	ERE1HM331W20OT
		12.5x25	0.10	0.034	1950	ERE1HM471W25OT
	560	12.5x25	0.10	0.034	1950	ERE1HM561W25OT

Radial Type

RE series

■ STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Size D×L(mm)	tan	Impedance (max/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part Number
63(1J)	22	6.3×11	0.09	0.95	120	ERE1JM220E11OT
		8×9	0.09	1.24	100	ERE1JM220F09OT
	27	6.3×11	0.09	0.95	120	ERE1JM270E11OT
		8×9	0.09	1.24	100	ERE1JM270F09OT
	33	6.3×11	0.09	0.95	120	ERE1JM330E11OT
		8×9	0.09	1.24	100	ERE1JM330F09OT
	39	8×11	0.09	0.51	235	ERE1JM390F11OT
		10×9	0.09	0.67	210	ERE1JM390G09OT
	47	8×11	0.09	0.51	235	ERE1JM470F11OT
		10×9	0.09	0.67	210	ERE1JM470G09OT
	56	8×11	0.09	0.51	235	ERE1JM560F11OT
		10×9	0.09	0.67	210	ERE1JM560G09OT
	68	8×11	0.09	0.51	235	ERE1JM680F11OT
		10×9	0.09	0.67	210	ERE1JM680G09OT
	82	10×12	0.09	0.34	315	ERE1JM820G12OT
		8×16	0.09	0.35	300	ERE1JM101F16OT
	100	10×12	0.09	0.34	315	ERE1JM101G12OT
		10×16	0.09	0.245	360	ERE1JM121G16OT
	150	8×20	0.09	0.265	360	ERE1JM151F20OT
	180	10×20	0.09	0.165	470	ERE1JM181G20OT
220	10×20	0.09	0.165	470	ERE1JM221G20OT	
270	12.5×20	0.09	0.125	700	ERE1JM271W20OT	
330	12.5×20	0.09	0.125	700	ERE1JM331W20OT	
390	12.5×25	0.09	0.095	930	ERE1JM391W25OT	
100(1K)	15	6.3×11	0.08	0.95	120	ERE1KM150E11OT
		8×9	0.08	1.24	100	ERE1KM150F09OT
	27	8×11	0.08	0.51	235	ERE1KM270F11OT
		10×9	0.08	0.67	210	ERE1KM270G09OT
	39	8×16	0.08	0.36	300	ERE1KM390F16OT
	47	10×12	0.08	0.34	315	ERE1KM470G12OT
	56	8×20	0.08	0.265	360	ERE1KM560F20OT
	68	10×16	0.08	0.245	360	ERE1KM680G16OT
	82	10×20	0.08	0.165	470	ERE1KM820G20OT
	100	10×20	0.08	0.165	470	ERE1KM101G20OT
	120	12.5×20	0.08	0.125	700	ERE1KM121W20OT
	180	12.5×25	0.08	0.095	930	ERE1KM181W25OT
	220	12.5×25	0.08	0.095	930	ERE1KM221W25OT