RE Series

- Low impedance for high frequency.
- Lifetime +105℃2,000 to 4000 hours
- Suitable for switching power, UPS, power sources etc.
- **RoHS Compliant**

◆ SPECIFICATIONS

Items	Characteristics
Category Temperature Range	–40 to +105℃(6.3 to 100V_{dc})
Rated Voltage Range	6.3 to100V_{dc}
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)
Leakage Current	I≦0.01CVor 3μA ,whichever is greater Where, I : Max. leakage current (μA),C : Nominal capacitance (μF),V : Rated voltage (V) (at 20℃,after 2minutes)

Dissipation Factor (tan δ)	Rated voltage (V_{dc})	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℃, 120Hz)									

Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V_{dc})	6.3	10	16	25	35	50	63	100
	Z(–25℃)/Z(+20℃)	4	3	2					
	Z(–40℃)/Z(+20℃)	8	6	4	3				

(at 120Hz)

Endurance

The following specification shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105℃

Capacitance change	≤±25% of the initial value
D.F. (tanδ)	≤200% of the initial specified value
Leakage current	≤The initial specified value

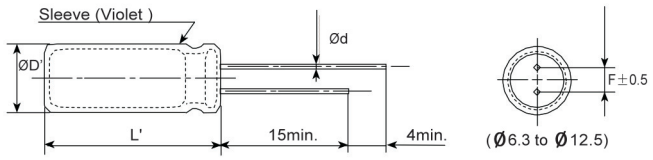
Case Dia	Life time (hours) 6.3~100WV
ØD=6.3	2000
ØD=8&10	3000
ØD≥12.5	4000

Shelf Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours at 105℃ without voltage applied.

Capacitance change	≤±25% of the initial value
D.F. (tanδ)	≤200% of the initial specified value
Leakage current	≤200%The initial specified value

◆ DIMENSIONS [mm]



ØD	6.3	8		10	12.5
Ød	0.5	0.5	0.6	0.6	0.6
F	2.5	3.5		5.0	5.0
ØD'	ØD+0.5max.				
L'	L+2max.				

◆ PART NUMBER SYSTEM

E RE 1H M 330 E11 O-- T

- T — Sleeve Code: PVC is "C" PET is "T"
- O-- — Terminal code
- E11 — Size code
- 330 — Capacitance code
- M — Capacitance tolerance code
- 1H — Voltage code
- RE — Series code
- E — Category

※Sleeve Code and Terminal Code should follow the part number 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 shorted with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

RE Series

◆ STANDARD RATINGS (Impedance :at 20℃ 100kHz /Ωmax , Ripple current :mArms/105℃ 100kHz)

WV (Vdc)	Cap (μF)	Case size ΦD×L(mm)	tanδ	Impedance (Ωmax)	Ripple current (mArms)
6.3(0J)	180	6.3×11 8×9	0.22	0.25 0.33	340 300
	220	6.3×11 8×9	0.22	0.25 0.33	340 300
	270	6.3×11 8×9	0.22	0.25 0.33	340 300
	330	8×11 10×9	0.22	0.13 0.17	650 580
	470	8×11 10×9	0.22	0.13 0.17	650 580
	560	8×11 10×9	0.22	0.13 0.17	650 580
	680	8×11 10×9	0.22	0.13 0.17	650 580
	820	10×12	0.22	0.08	870
	1000	10×9 10×12	0.22	0.17 0.08	580 870
	1200	10×12	0.22	0.08	870
	1500	8×20 10×16	0.22	0.068 0.060	1050 1210
	1800	10×20	0.22	0.045	1400
	2200	10×20	0.24	0.045	1400
	2700	10×25 12.5×20	0.24	0.042 0.035	1650 1900
	3300	10×25 12.5×20	0.26	0.042 0.035	1650 1900
	3900	12.5×20	0.26	0.035	1900
	4700	12.5×25	0.28	0.030	2130
10(1A)	150	6.3×11 8×9	0.19	0.25 0.33	340 300
	180	6.3×11 8×9	0.19	0.25 0.33	340 300
	220	6.3×11 8×9	0.19	0.25 0.33	340 300
	270	8×9 10×9	0.19	0.33 0.17	300 580
	330	10×9	0.19	0.17	580
	470	10×9	0.19	0.17	580
	560	10×9	0.19	0.17	580
	680	10×9	0.19	0.17	580
	820	10×12	0.19	0.08	870
	1000	8×16 10×16	0.19	0.087 0.06	850 1210
	1200	10×20	0.19	0.045	1400
	1500	10×20	0.19	0.045	1400
	1800	10×20	0.19	0.045	1400
	2200	10×20	0.21	0.045	1400
	2700	10×25 12.5×20	0.21	0.042 0.035	1650 1900
	3300	12.5×25	0.23	0.030	2130
16(1C)	100	8×9	0.16	0.33	300
	120	8×9	0.16	0.33	300
	150	8×9 10×9	0.16	0.33	300 580
	180	8×9 10×9	0.16	0.33	300 580
	220	8×9 10×9	0.16	0.33	300 580
	270	10×9	0.16	0.17	580
	330	10×9	0.16	0.17	580
	470	10×9 10×12	0.16	0.17 0.08	580 870
	560	10×12	0.16	0.08	870
	680	8×16 10×12	0.16	0.087 0.08	850 870
	820	10×16	0.16	0.06	1210
	1000	10×16	0.16	0.06	1210
	1200	10×20	0.16	0.045	1400
	1500	10×20	0.16	0.045	1400
	1800	10×25 12.5×20	0.16	0.042 0.035	1650 1900
	2200	12.5×20	0.18	0.035	1900
	2700	12.5×20	0.18	0.030	2130

WV (Vdc)	Cap (μF)	Case size ΦD×L(mm)	tanδ	Impedance (Ωmax)	Ripple current (mArms)
25(1E)	82	6.3×11 8×9	0.14	0.25 0.33	340 300
	100	6.3×11 8×9	0.14	0.25 0.33	340 300
	120	8×11 10×9	0.14	0.13 0.17	650 580
	150	8×11 10×9	0.14	0.13 0.17	650 580
	180	8×11 10×9	0.14	0.13 0.17	650 580
	220	8×11 10×9	0.14	0.13 0.17	650 580
	270	10×9 10×12	0.14	0.17 0.08	580 870
	330	10×9 10×12	0.14	0.17 0.08	580 870
	470	8×16 10×12	0.14	0.087 0.080	840 870
	560	10×16	0.14	0.060	1210
	680	10×16	0.14	0.060	1210
	820	10×20	0.14	0.045	1400
	1000	10×20	0.14	0.045	1400
	1200	10×20	0.14	0.045	1400
	1500	10×25 12.5×20	0.14	0.042 0.035	1650 1900
	1800	12.5×25	0.14	0.030	2130
	2200	12.5×25	0.16	0.030	2130
35(1V)	47	6.3×11 8×9	0.12	0.25 0.33	340 300
	56	6.3×11 8×9	0.12	0.25 0.33	340 300
	68	6.3×11 8×9	0.12	0.25 0.33	340 300
	82	8×11 10×9	0.12	0.13 0.17	650 580
	100	8×11 10×9	0.12	0.13 0.17	650 580
	120	8×11 10×9	0.12	0.13 0.17	650 580
	150	8×11 10×9	0.12	0.13 0.17	650 580
	180	10×12	0.12	0.080	870
	220	8×11 10×9 8×16 10×12	0.12	0.13 0.17 0.087 0.080	650 580 840 870
	270	10×16	0.12	0.06	1210
	330	8×20 10×12 10×16	0.12	0.069 0.080 0.060	1050 870 1210
	470	10×16	0.12	0.060	1210
	560	10×20	0.12	0.045	1400
	680	10×20	0.12	0.045	1400
	820	10×25 12.5×20	0.12	0.042 0.035	1650 1900
	1000	12.5×20 12.5×25	0.12	0.035 0.030	1900 2130
50(1H)	33	6.3×11 8×9	0.10	0.30 0.40	295 260
	39	6.3×11 8×9	0.10	0.30 0.40	295 260
	47	6.3×11 8×9	0.10	0.30 0.40	295 260
	56	8×11 10×9	0.10	0.17 0.23	560 500
	68	8×11 10×9	0.10	0.17 0.23	560 500
	82	8×11 10×9	0.10	0.17 0.23	560 500
	100	10×12	0.10	0.12	760
	120	8×16 10×12	0.10	0.12 0.12	730 760
	150	10×16	0.10	0.084	1050
	180	8×20 10×16	0.10	0.090 0.084	1050
	220	10×16	0.10	0.084	1050
	270	10×25	0.10	0.055	1440
	330	12.5×20	0.10	0.045	1660
	470	12.5×25	0.10	0.034	1950
	560	12.5×25	0.10	0.034	1950

RE Series

◆ STANDARD RATINGS (Impedance :at 20℃ 100kHz /Ωmax , Ripple current :mArms/105℃ 100kHz)

WV (Vdc)	Cap (μF)	Case size ΦD×L(mm)	tanδ	Impedance (Ωmax)	Ripple current (mArms)
63(1J)	22	6.3×11 8×9	0.09	0.95 1.24	120 100
	27	6.3×11 8×9	0.09	0.95 1.24	120 100
	33	6.3×11 8×9	0.09	0.95 1.24	120 100
	39	8×11 10×9	0.09	0.51 0.67	235 210
	47	8×11 10×9	0.09	0.51 0.67	235 210
	56	8×11 10×9	0.09	0.51 0.67	235 210
	68	8×11 10×9	0.09	0.51 0.67	235 210
	82	10×12	0.09	0.340	315
	100	8×16 10×12	0.09	0.350 0.340	300 315
	120	10×16	0.09	0.245	360
	150	8×20	0.09	0.265	360
	180	10×20	0.09	0.165	470
	220	10×20	0.09	0.165	470
	270	12.5×20	0.09	0.125	700
	330	12.5×20	0.09	0.125	700
	390	12.5×25	0.09	0.095	930

WV (Vdc)	Cap (μF)	Case size ΦD×L(mm)	tanδ	Impedance (Ωmax)	Ripple current (mArms)
100(1K)	15	6.3×11 8×9	0.08	0.95 1.24	120 100
	27	8×11 10×9	0.08	0.51 0.67	235 210
	39	8×16	0.08	0.36	300
	47	10×12	0.08	0.34	315
	56	8×20	0.08	0.265	360
	68	10×16	0.08	0.245	360
	82	10×20	0.08	0.165	470
	100	10×20	0.08	0.165	470
	120	12.5×20	0.08	0.125	700
	180	12.5×25	0.08	0.095	930
	220	12.5×25	0.08	0.095	930