

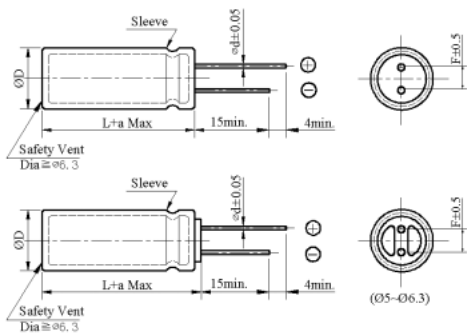
ME Series

- Fast charging of GaN.
- Load life 2,000 hours at 105°C.
- RoHS, REACH Compliant.

◆ SPECIFICATIONS

Item	Performance Characteristics												
Category Temperature Range	-40 ~ +105℃												
Working Voltage Range	6.3 ~ 550Vdc												
Capacitance Range	0.47 ~ 22000 μF												
Capacitance Tolerance	±20% (at 25℃ and 120Hz)												
Dissipation Factor (tanδ) (at 25℃, 120Hz)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160 ~250	400 ~ 550		
	tanδ (Max)	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.10	0.15	0.20		
	The above values should be increased by 0.02 for every additional 1000μF												
Leakage Current	6.3~100Vdc						160~450Vdc						
	I≤0.01CV or 3μA,Whichever is greater(2minutes)						I≤0.03CV+ 10μA (2minutes)						
	I : Leakage current (μA) C : Rated capacitance (μF) V : Ratedvoltage(V)												
Low Temperature Characteristics Impedance Ratio(MAX)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160 ~250	400 ~ 550	(at 120Hz)	
	Z(-40℃)/Z(+20℃)	12	10	8	5	4	3	3	3	3	6		
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25℃ after the rated voltage applied for 2,000 hours at 105℃.												
	Capacitance change				≧±20% of the initial value								
	Dissipation factor(tanδ)				≧200% of the specified value								
	Leakage current				≧specified value								
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 25℃ after exposing them for 1,000 hours at 105℃ without voltage applied.												
	Capacitance change				≧±20% of the initial value								
	Dissipation factor(tanδ)				≧200% of the specified value								
	Leakage current				≧200% of the specified value								
Others	Conforms to JIS-C-5101-4 (1998) and IEC 60384-4												

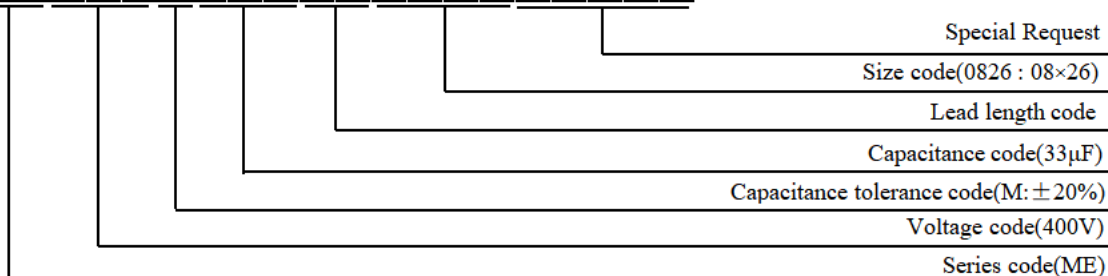
◆ DIMENSIONS(mm)



ΦD	5	6.3	8	10	12.5	16	18	20	22
ΦD	ΦD +0.5 Max							ΦD +1.0 Max	
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	10
a	L+1.5Max				$\leq 35 L+1.5Max$ $\geq 40 L+2.0Max$	L+1.5 Max		L+2.0 Max	

◆ PART NUMBER SYSTEM(Example : 400V 33 μ F)

M	E	4	0	0	M	0	3	3	L	0	0	8	2	6						
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ME Series

◆ Case size & Permissible rated ripple current: (mA rms) at 105°C / 120Hz.

uF \ Vdc	6.3		10		16		25	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
10					5×11	40	5×11	43
15					5×11	45	5×11	47
22	5×11	45	5×11	51	5×11	55	5×11	60
33	5×11	55	5×11	60	5×11	70	5×11	75
47	5×11	65	5×11	75	5×11	85	5×11	90
68	5×11	70	5×11	80	5×11	100	6.3×11	125
100	5×11	100	5×11	110	5×11	115	6.3×11	145
150	6.3×11	120	6.3×11	130	8×11.5	180	8×11	200
220	6.3×11	180	6.3×11	190	8×11.5	240	8×11	250
330	6.3×11	195	6.3×11	210	8×11.5	285	10×12	350
470	8×11	300	8×11	330	10×12	380	10×16	460
680	10×12	320	10×12	420	10×16	530	10×20	650
1000	10×12	480	10×12	460	10×20	680	12.5×20	830
1500	10×16	600	10×20	750	12.5×20	860	12.5×25	1020
2200	10×20	830	12.5×20	980	12.5×25	1130	16×25	1210
3300	10×20	840	12.5×25	1250	16×25	1270	16×32	1540
4700	12.5×20	1090	16×25	1350	16×32	1570	16×35	1650
6800	12.5×25	1350	16×32	1670	18×35	1930	18×35	1950
10000	16×25	1650	18×35	2010	18×40	2060	18×40	2100
15000	16×32	1820	18×40	2360				
22000	18×35	2280						

uF \ Vdc	35		50		63		100	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
0.47			5×11	11	5×11	8	5×11	12
1			5×11	16	5×11	12	5×11	18
2.2			5×11	23	5×11	20	5×11	27
3.3			5×11	29	5×11	24	5×11	33
4.7			5×11	34	5×11	34	5×11	39
6.8			5×11	35	5×11	37	5×11	46
10	5×11	47	5×11	50	5×11	50	6.3×11	65
15	5×11	50	5×11	52	5×11	65	6.3×11	66
22	5×11	65	5×11	75	6.3×11	85	6.3×11	85
33	5×11	88	6.3×11	100	6.3×11	110	8×11	130
47	6.3×11	100	6.3×11	125	8×11	150	10×12	165
68	6.3×11	110	8×11	159	10×12	198	10×16	200
100	6.3×11	150	8×11	210	10×12	250	10×20	265
150	10×12	240	10×12	290	10×16	330	12.5×20	335
220	10×12	320	10×16	370	10×20	410	12.5×25	440
330	10×16	420	10×20	550	12.5×20	550	16×25	660
470	10×20	570	10×20	660	12.5×25	720	16×32	880
680	12.5×20	730	12.5×25	860	16×25	1000	16×35	1202
1000	12.5×25	1000	13×25	1020	16×32	1130	18×35	1300
1500	16×25	1110	16×32	1350	16×35	1450		
2200	16×32	1450	16×35	1690	18×40	1780		
3300	18×32	1600	18×40	2060				
4700	18×35	1910	22×40	2310				

ME Series

◆ Case size & Permissible rated ripple current: (mA rms) at 105°C / 120Hz.

uF \ Vdc	160		200		250		350	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
0.47	5×11	13	5×11	13	5×11	13	5×11	11
1	5×11	18	5×11	15	6.3×11	18	6.3×11	18
2.2	6.3×11	27	6.3×11	27	6.3×11	23	8×11	23
3.3	6.3×11	28	6.3×11	28	8×11	30	8×11	30
4.7	6.3×11	32	8×11	36	8×11	39	10×12	40
6.8	8×11	38	8×11	40	10×12	42	10×16	42
10	8×11	55	10×12	60	10×16	75	10×20	75
15	10×12	70	10×16	75	10×16	85	12.5×20	140
22	10×20	140	10×20	150	12.5×20	160	12.5×20	165
33	10×20	145	12.5×20	160	12.5×20	165	16×25	165
47	12.5×20	195	12.5×20	195	12.5×25	195	16×25	200
56	12.5×20	215	12.5×20	215	12.5×25	215	16×32	230
68	12.5×25	270	12.5×25	270	16×25	280	16×35	290
82	12.5×25	290	16×25	305	16×25	305	18×32	315
100	16×25	340	16×25	340	16×32	350	18×32	370
120	16×25	360	16×32	370	16×32	380	18×35	390
150	16×32	435	16×32	440	16×35	460	18×40	470
180	16×35	450	16×35	460	18×35	470	18×45	480
220	16×32	500	16×35	500	18×35	510		
330	18×35	600	18×35	610	18×45	610		
470	18×45	740	18×45	750				
560	18×50	800	18×50	805				

uF \ Vdc	400		450		500		550	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
0.47	6.3×11	15	6.3×11	16				
1	6.3×9	14	8×12	31				
2.2	6.3×9	21	8×11	25	8×12	49	8×12	27
	8×12	35						
3.3	6.3×11	35	8×9	40	8×12	60	8×12	34
	8×9	40	10×12	52				
4.7	6.3×11	42	8×14	60	10×13	78	8×12	46
	8×12	55	10×12	72				
6.8	8×12	65	10×13	84	10×13	98	10×13	80
	10×13	75						
8.2	6.3×16	78						
	8×12	80						
10	7×16	90	8×14	88	10×16	105	10×16	112
	8×12	88	10×13	98				
	10×12	95						
15	7×20	112						
	8×16	138	8×18	149	8×30	162	10×20	220
	10×14	145	10×16	165	12.5×25	180	13×16	242
22	7×25	163						
	8×18	165	10×20	205				
	10×16	185	12.5×20	233	13×20	260	13×20	283
	12.5×16	206	13×16	256	16×17	288		
27	8×23	170						
	10×18	189	10×18	195				
	13×16	211	13×17	200				
33	8×26	186			13×30	250	13×25	320
	10×20	210	13×20	230				
	13×16	233	16×20	280	16×25	305	16×30	360
47	8×45	245	10×40	267				
	10×25	302	12.5×30	374				
	13×20	340	13×25	400	18×20	440	18×25	470
	16×18	370	16×20	437				

ME Series

◆ Case size & Permissible rated ripple current: (mA rms) at 105°C / 120Hz.

uF \ Vdc	400		450		500		550	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
56	10×35	236	10×50	296				
	13×20	289	16×25	440	18×32	460	16×40	540
	16×20	400	18×30	470	18×35	540	18×40	586
68	13×30	366						
	16×25	403	16×25	420				
	18×20	437	18×20	455	18×35	560	18×35	590
82	16×32	390	18×32	550	18×40	600	18×45	635
100	18×32	430	18×35	620	18×45	660	18×50	710
120	18×35	480	18×40	690	18×50	740		
150	18×40	660	18×45	760				
180	18×45	720	18×50	840				

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Cap(uF)	Frequency (Hz)				
		50/60	120	1K	10K	100K
6.3 ~ 160	0.47 ~ 68	0.75	1.00	1.35	1.57	2.00
	100 ~ 680	0.80	1.00	1.30	1.40	1.50
	1000 ~ 22000	0.85	1.00	1.10	1.13	1.15
200 ~ 550	0.47 ~ 220	0.80	1.00	1.25	1.40	1.40
	330 ~ 560	0.90	1.00	1.10	1.13	1.15