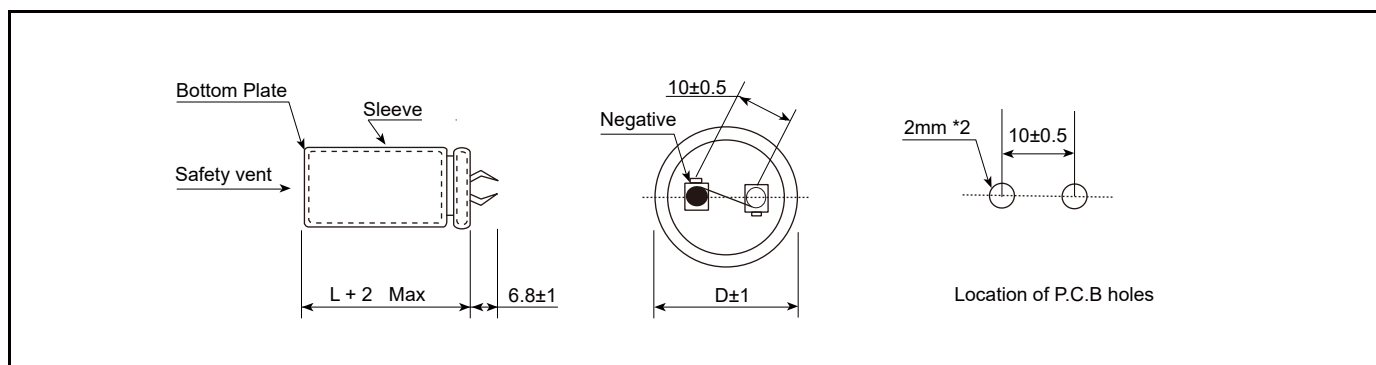


- ◎Load life of 3000-5000hours at 105℃.
- ◎Used in switching power supply.

<u>RIP</u> ↓	<u>338</u> ↓	<u>M</u> ↓	<u>016</u> ↓	<u>01250250</u> ↓	<u>050</u> ↓	<u>B</u> ↓	<u>000</u> ↓	<u>-</u> ↓
<u>Type</u>	<u>Capacitance code</u>	<u>Tolerance</u>	<u>Rated Voltage</u>	<u>Size Code</u>	<u>Pitch</u>	<u>Package</u>	<u>Lead Length</u>	<u>Additional characters maybe added for special requirements</u>
RIP	pF Code: 1st two digits	M: -20%~+20%	Code 016: 16VDC	Code 01250250: Size 12.5*25mm	Axial: 000	B: BULK	Standard: 000	
RHP	represent significant		For DC Voltage		2.0: 020	T: AMMO TAPED	Cut Lead Length:	
RGR	figures		006: 6.3VDC	00630110: Size 6.3*11mm	2.5: 025		3.0mm: 030	
RGL	3rd digit represents		016: 16VDC	01250250: Size 12.5*25mm	3.5: 035		3.5mm: 035	
RB2	multiplier		035: 35VDC	01600250: Size 16*25mm	5.0: 050		4.0mm: 040	
RM2	(number of zeros to follow)		200: 200VDC		7.5: 075		4.5mm: 045	
	107 = 100uF		450: 450VDC				5.0mm: 050	
	108 = 1000uF							
	338 =3300uF							

Items	Characteristics												
Operating temperature range	-40~+105℃						-25~+105℃						
Rated voltage range	10V~100V DC						160V~500V DC						
Nominal capacitance tolerance	47μF~47000μF												
Capacitance tolerance	±20% (120Hz·20℃)												
leakage current(20℃)	$I \leq 3 \sqrt{CV}$ after 5minute I: Leakage current C: Nominal capacitance V: Rated voltage												
Dissipation factor (120Hz·20℃)	Less than the value under table (%)												
	Cap(uf)\Rated voltage(V)	10~16		25~35		50~63		80~100		160~250		315~500	
	47~390	—		—		—		15		15		20	
	470~3900	25		20		20		20		15		20	
	4700~8200	35		30		30		25		—		—	
	10000~22000	40		35		30		—		—		—	
	27000~47000	45		40		35		—		—		—	
	56000~68000	50		45		—		—		—		—	
Low temperature characteristics (Impedance ratio max. at 120Hz)	Rated voltage(v)	10	16	25	35	50	63	80	100	160~250	315~450		
	Z—25℃/Z+20℃	5	5	4	4	4	3	3	3	6	8		
	Z—40℃/Z+20℃	15	15	15	15	15	15	15	12	—	—		
Endurance	After applying rated for 3000-5000 hours at 105℃ then resumed 16 hours:												
	Capacitance change	Within ±20% of the initial measured value											
	tgδ	≤200% of the initial specified value											
	Leakage current	≤initial specified value											
Shelf life	After storage for 1000 hours at 105℃ then resumed 16 hours:												
	Capacitance change	Within ±15% of the initial measured value											
	tgδ	≤150% of the initial specified value											
	Leakage current	≤initial specified value											

Diagram of Dimensions(mm)



Multiplier for Ripple Current vs. Frequency:

CAP(uF)\Hz	50(60)	120	1K	10-50K
10-100V	0.90	1.00	1.15	1.25
160-250V	0.80	1.00	1.25	1.47
315-450V	0.80	1.00	1.30	1.47

Multiplier for Ripple Current vs. Temperature:

Temperatur&C	45	60	85	95	105
Factor	2.10	1.90	1.40	1.25	1.00

Standard Ratings

Voltage (Code)		10V (010)		16V (016)		25V (025)		35V (035)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
2700	278							20 x 25	1.62
3300	338							20 x 30	1.94
								22 x 25	1.9
3900	398					20 x 25	1.72	20 x 35	2.02
								22 x 30	2
4700	478					20 x 30	2.04	20 x 40	2.21
						22 x 25	2	22 x 35	2.2
								25 x 25	2.2
5600	568			20 x 25	1.89	20 x 35	2.23	22 x 35	2.4
						22 x 30	2.2	25 x 30	2.4
6800	688	20 x 25	1.41	20 x 30	2.25	20 x 40	2.72	22 x 40	2.6
				22 x 25	2.2	22 x 30	2.4	25 x 35	2.6
						25 x 25	2.4	30 x 25	2.78
8200	828	20 x 30	1.67	20 x 35	2.43	22 x 35	2.7	22 x 50	2.9
				22 x 30	2.4	25 x 30	2.7	25 x 40	2.9
						30 x 25	2.7	30 x 30	2.9
10000	109	20 x 30	1.88	20 x 40	2.79	22 x 40	3	25 x 45	3.2
		22 x 25	1.8	22 x 30	2.6	25 x 35	3	30 x 35	3.2
				25 x 25	2.6	30 x 30	3		
12000	129	20 x 35	2.23	22 x 35	2.9	22 x 50	3.2	25 x 50	3.5
		22 x 30	2.2	25 x 30	2.9	25 x 40	3.2	30 x 40	3.5
		25 x 25	2.2			30 x 30	3.2	35 x 30	3.5
15000	159	20 x 40	2.31	22 x 40	3.2	25 x 45	3.6	30 x 45	3.9
		22 x 35	2.3	25 x 35	3.2	30 x 35	3.6	35 x 35	3.9
		25 x 25	2.3	30 x 25	3.11	35 x 30	3.6		
18000	189	22 x 40	2.52	22 x 45	3.5	30 x 40	3.9	35 x 40	4.51
		25 x 30	2.4	25 x 40	3.5	35 x 35	3.9		
		30 x 25	2.49	30 x 30	3.5				
22000	229	22 x 45	2.6	25 x 45	3.8	30 x 45	4.3	35 x 45	5.24
		25 x 35	2.6	30 x 30	3.8	35 x 35	4.3		
		30 x 25	2.6	35 x 30	3.8				
27000	279	22 x 45	3.19	25 x 50	4.2	35 x 45	4.8		
		25 x 40	3.1	30 x 35	4.2				
		30 x 30	3.1	35 x 30	4.2				
33000	339	25 x 45	3.4	30 x 40	4.7	35 x 50	5.55		
		30 x 35	3.4	35 x 35	4.7				
		35 x 30	3.4						
39000	399	30 x 40	3.79	30 x 45	4.9				
		35 x 30	3.7	35 x 40	5.1				
47000	479	30 x 45	4.26	30 x 50	5.27				
		35 x 35	4.2	35 x 45	5.5				
56000	569	35 x 40	5						

Maximum Allowable Ripple Current (Arms) at 105°C 120Hz
L (mm)

Case Size ΦD x L(mm)

Standard Ratings

Voltage (Code)		50V (050)		63V (063)		80V (080)		100V (100)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
560	567							20 x 25	0.95
680	687							20 x 30	1.15
								22 x 25	1.09
820	827					20 x 25	1.04	20 x 35	1.31
								22 x 30	1.4
1000	108			20 x 25	1.21	20 x 30	1.24	20 x 35	1.43
						22 x 25	1.19	22 x 30	1.47
								25 x 25	1.45
1200	128			20 x 30	1.43	20 x 35	1.43	20 x 40	1.61
				22 x 25	1.4	22 x 30	1.5	22 x 35	1.69
								25 x 30	1.68
1500	158	20 x 25	1.29	22 x 30	1.5	22 x 35	1.57	22 x 40	1.97
						25 x 25	1.59	30 x 25	1.9
1800	188	20 x 30	1.53	20 x 35	1.72	20 x 40	1.77	22 x 45	2.23
		22 x 25	1.5	22 x 30	1.7	22 x 35	1.79	25 x 40	2.2
				25 x 25	1.7	25 x 30	1.71	30 x 30	2.2
2200	228	20 x 35	1.72	20 x 40	2.01	22 x 40	2.03	25 x 45	2.53
		22 x 30	1.7	22 x 35	2	25 x 35	2.1	30 x 35	2.55
				25 x 30	2	30 x 25	1.98	35 x 30	2.6
2700	278	20 x 35	1.82	22 x 40	2.2	22 x 45	2.39	25 x 50	2.82
		22 x 30	1.8	25 x 35	2.2	25 x 40	2.35	30 x 40	2.86
		25 x 25	1.8	30 x 25	2.2	30 x 30	2.35	35 x 35	2.9
3300	338	20 x 40	2.01	22 x 45	2.6	25 x 45	2.64	30 x 45	3.3
		22 x 35	2	25 x 35	2.39	30 x 35	2.61	35 x 35	3.25
		25 x 30	2	30 x 30	2.5	35 x 30	2.6		
3900	398	22 x 40	2.23	25 x 40	2.57	25 x 50	2.92	30 x 50	3.6
		25 x 30	2.2	30 x 35	2.7	30 x 40	2.82	35 x 40	3.67
		30 x 25	2.2			35 x 30	2.97		
4700	478	22 x 45	2.5	25 x 50	3	30 x 45	3.34	35 x 45	3.8
		25 x 35	2.43	30 x 40	3	35 x 35	3.38		
		30 x 30	2.5	35 x 30	3				
5600	568	22 x 50	2.8	30 x 40	3.22	30 x 50	3.8	35 x 50	4.05
		25 x 40	2.8	35 x 35	3.3	35 x 40	3.8		
		30 x 30	2.76						
6800	688	25 x 45	3.3	30 x 50	3.86	35 x 45	3.9		
		30 x 35	3.3	35 x 40	3.84				
		35 x 30	3.3						
8200	828	30 x 40	3.71	35 x 45	4.43	35 x 50	4.2		
		35 x 35	3.85						
10000	109	30 x 50	4.51	35 x 50	5.11				
		35 x 40	4.49						
12000	129	35 x 45	4.56						
15000	159	35 x 50	4.8						

Maximum Allowable Ripple Current (Arms) at 105°C 120Hz

Case Size ΦD x L (mm)

Standard Ratings

Voltage (Code)		160V (160)		180V (180)		200V (200)		220V (220)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
180	187							20 x 25	0.9
220	227			20 x 25	1	20 x 25	1	20 x 30	1
								22 x 25	1
270	277	20 x 25	1.1	20 x 30	1.1	20 x 30	1.1	20 x 35	1.15
				22 x 25	1	22 x 25	1.1	22 x 30	1.15
330	337	20 x 30	1.2	20 x 35	1.2	20 x 35	1.2	20 x 40	1.25
		22 x 25	1.2	22 x 30	1.2	22 x 30	1.25	22 x 35	1.25
						25 x 25	1.25	25 x 25	1.25
390	397	20 x 35	1.42	20 x 35	1.3	20 x 40	1.31	20 x 45	1.4
		22 x 30	1.3	22 x 30	1.35	22 x 35	1.35	22 x 35	1.4
				25 x 25	1.35	25 x 30	1.35	25 x 25	1.4
470	477	20 x 40	1.34	20 x 40	1.4	22 x 40	1.5	22 x 40	1.51
		22 x 30	1.55	22 x 35	1.5	25 x 30	1.5	25 x 30	1.44
		25 x 25	1.55	25 x 30	1.5	30 x 25	1.5	30 x 25	1.5
560	567	22 x 35	1.67	22 x 40	1.67	22 x 45	1.67	25 x 35	1.64
		25 x 30	1.67	25 x 30	1.67	25 x 35	1.7	30 x 30	1.7
				30 x 25	1.67	30 x 25	1.67	35 x 25	1.71
680	687	22 x 40	1.82	22 x 45	1.78	22 x 50	1.78	25 x 40	1.84
		25 x 35	1.85	25 x 35	1.78	25 x 40	1.82	30 x 35	1.93
		30 x 25	1.82	30 x 30	1.78	30 x 30	1.78	35 x 30	1.89
820	827	22 x 45	2.04	22 x 50	2.04	25 x 45	2.1	25 x 45	2.08
		25 x 40	2.04	25 x 40	2.04	30 x 35	2.04	30 x 40	2.19
		30 x 30	2.04	30 x 30	2.04	35 x 30	2.04	35 x 30	2.16
1000	108	25 x 45	2.4	25 x 45	2.3	25 x 50	2.42	30 x 45	2.5
		30 x 35	2.25	30 x 35	2.3	30 x 40	2.3	35 x 35	2.44
				35 x 30	2.3	35 x 35	2.3		
1200	128	25 x 50	2.62	30 x 40	2.55	30 x 45	2.65	35 x 40	2.79
		30 x 40	2.49	35 x 35	2.55	35 x 35	2.65		
		35 x 30	2.49						
1500	158	30 x 45	2.84	30 x 45	2.9	35 x 40	3.08	35 x 45	3.22
		35 x 35	2.84	35 x 40	2.9				
1800	188	30 x 50	3.32	35 x 45	3.3	35 x 45	3.48		
		35 x 40	3						
2200	228	35 x 45	3.5	35 x 50	3.65				

Maximum Allowable Ripple Current (Arms) at 105°C 120Hz

Case Size ΦD x L (mm)

Standard Ratings

Voltage (Code)		250V (250)		315V (315)		350V (350)		385V (385)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
56	566							20 x 25	0.37
68	686					20 x 25	0.47	20 x 30	0.44
								22 x 25	0.45
82	826			20 x 25	0.64	20 x 30	0.54	20 x 30	0.5
								22 x 30	0.52
100	107			20 x 30	0.69	20 x 30	0.6	20 x 35	0.56
						22 x 25	0.69	22 x 30	0.58
								25 x 25	0.57
120	127			20 x 30	0.75	20 x 35	0.68	20 x 40	0.66
				22 x 25	0.75	22 x 30	0.75	22 x 35	0.68
						25 x 25	0.75	25 x 30	0.68
150	157	20 x 25	0.79	20 x 35	0.82	20 x 40	0.78	22 x 40	0.79
				22 x 30	0.82	22 x 35	0.82	25 x 30	0.78
				25 x 25	0.82	25 x 30	0.83	30 x 25	0.75
180	187	20 x 30	0.9	20 x 40	0.9	22 x 40	0.92	22 x 45	0.89
		22 x 25	0.88	22 x 35	0.92	25 x 30	0.92	25 x 35	0.86
				25 x 30	0.93	30 x 25	0.9	30 x 30	0.88
220	227	20 x 35	1	22 x 40	1.04	22 x 50	1.05	22 x 50	1.01
		22 x 30	1	25 x 30	1.04	25 x 35	1.04	25 x 40	1
		25 x 25	1.08	30 x 25	1.04	30 x 30	1.02	30 x 30	1
270	277	20 x 40	1.1	22 x 45	1.16	22 x 50	1.16	25 x 45	1.13
		22 x 35	1.18	25 x 35	1.16	25 x 40	1.18	30 x 40	1.14
		25 x 30	1.27	30 x 25	1.16	30 x 30	1.17	35 x 30	1.1
330	337	22 x 40	1.3	22 x 50	1.33	25 x 45	1.29	30 x 45	1.31
		25 x 30	1.3	25 x 40	1.33	30 x 35	1.34		
		30 x 25	1.35	30 x 30	1.33	35 x 30	1.22	35 x 35	1.32
390	397	22 x 45	1.49	25 x 45	1.47	25 x 50	1.51	30 x 50	1.48
		25 x 35	1.49	30 x 35	1.47	30 x 40	1.51		
		30 x 30	1.49	35 x 30	1.47	35 x 35	1.47	35 x 40	1.48
470	477	22 x 50	1.65	30 x 40	1.7	30 x 45	1.65	35 x 45	1.76
		25 x 40	1.65	35 x 30	1.7	35 x 35	1.69		
		30 x 30	1.65						
560	567	25 x 45	1.8	30 x 45	2.05	30 x 50	1.85	35 x 50	1.95
		30 x 35	1.8	35 x 35	2.05	35 x 40	1.9		
680	687	25 x 50	2.03	35 x 40	2.17	35 x 45	2.2		
		30 x 40	2						
		35 x 30	2						
820	827	30 x 45	2.3	35 x 45	2.2				
		35 x 35	2.3						
1000	108	30 x 50	2.7						
		35 x 40	2.69						
1200	128	35 x 45	3.09						

Maximum Allowable Ripple Current (Arms) at 105°C 120Hz

Case Size ΦD x L (mm)

Standard Ratings

Voltage (Code)		400V (400)		420V (420)		450V (450)		500V (500)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
47	476					20 x 25	0.39		
56	566	20 x 25	0.51	20 x 25	0.51	20 x 30	0.51		
						22 x 25	0.5		
68	686	20 x 30	0.56	20 x 30	0.56	20 x 35	0.56		
		22 x 25	0.5	22 x 25	0.55	20 x 35	0.56		
						22 x 30	0.53		
82	826	20 x 30	0.64	20 x 35	0.64	20 x 35	0.64		
		22 x 25	0.64	22 x 25	0.64	22 x 30	0.64		
				25 x 25	0.64	25 x 25	0.64		
100	107	20 x 35	0.7	20 x 35	0.7	22 x 35	0.69		
		22 x 30	0.7	22 x 30	0.7	25 x 25	0.65		
		25 x 25	0.7	25 x 25	0.7	30 x 25	0.72		
120	127	20 x 40	0.75	20 x 40	0.75	22 x 40	0.8		
		25 x 30	0.76	22 x 35	0.75	25 x 30	0.8		
		25 x 30	0.76	25 x 30	0.75	30 x 25	0.8		
				30 x 25	0.75				
150	157	22 x 40	0.88	22 x 40	0.88	22 x 45	0.88		
		25 x 30	0.82	25 x 35	0.88	25 x 35	0.88		
		30 x 25	0.88	30 x 25	0.88	30 x 30	0.88		
180	187	22 x 45	0.98	22 x 45	0.95	25 x 40	1		
		25 x 30	0.98	25 x 40	0.97	30 x 30	1		
		30 x 30	0.98	30 x 30	0.96				
				35 x 25	0.94				
220	227	22 x 50	1.1	25 x 45	1.13	25 x 45	1.12		
		25 x 40	1.1	30 x 35	1.1	30 x 35	1.12		
		30 x 30	1.1	35 x 25	1.1	35 x 30	1.12		
270	277	25 x 50	1.29	25 x 50	1.37				
		30 x 35	1.22	30 x 40	1.25	30 x 40	1.28		
		35 x 30	1.22	35 x 30	1.22	35 x 35	1.25		
330	337	30 x 45	1.55	30 x 45	1.49	30 x 50	1.45		
		35 x 30	1.44	35 x 35	1.45	35 x 40	1.45		
390	397	30 x 45	1.6	30 x 45	1.49	30 x 50	1.45		
		35 x 30	1.44	35 x 35	1.45	35 x 40	1.45		
470	477	35 x 40	1.9	35 x 45	1.9	35 x 50	1.85		
560	567	35 x 45	2.12						
680	687					35 x 55	2.3	35 x 60	1.9

Maximum Allowable Ripple Current (Arms) at 105°C 120Hz

Case Size ΦD x L (mm)