

MG series

- Low impedance at high frequency range.
- Smaller case size and high ripple current.
- RoHS Compliance.
- 高頻超低阻抗。
- 小尺寸高紋波電流。



SPECIFICATIONS

Items 項目	Characteristics 特性						
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)						
Operating Temperature Range 適用溫度範圍	-40 ~ +105°C						
Rated Voltage Range 額定電壓範圍	6.3 ~ 35VDC						
Leakage Current 洩漏電流	$I \leq 0.01CV$ or $3(\mu A)$ which is greater.(After 2 minutes application of DC rated voltage, at 20°C)						
Dissipation Factor 散逸因素($\tan \delta$)	Measurement Frequency: 120Hz. Temperature: 20°C						
	Rated Voltage(V)	6.3	10	16	25	35	50~100
	$\tan \delta$ (Max)	0.21	0.18	0.15	0.13	0.11	0.09
When nominal capacitance over 1000 μF , $\tan \delta$ shall be added 0.02 to the listed value with increase of every 1000 μF .							
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.						
	Rated Voltage(V)	6.3	10	16	25	35	
	Z(-25°C)/Z(20°C)	2	2	2	2	2	
	Z(-40°C)/Z(20°C)	3	3	3	3	3	
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 6,000 hours ($\phi D \leq 6.3:5,000$ hours) at 105°C.						
	Capacitance Change	Within ± 25% of Initial Value					
	$\tan \delta$	200% or less of Initial Specified Value					
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.						
	Capacitance Change	Within ± 20% of Initial Value					
	$\tan \delta$	200% or less of Initial Specified Value					
	Leakage Current	Initial Specified Value or less					
Standards 參照標準	JIS C 5101-4 (IEC 60384)						

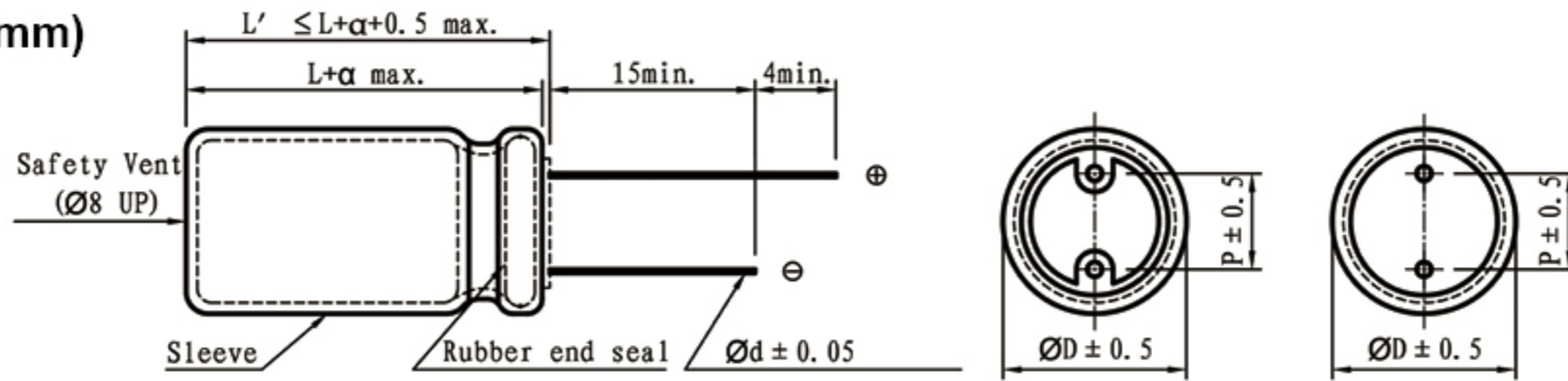
Frequency Coefficient of Permissible Ripple Current

Capacitance (μF)	Frequency (Hz)			
	120	1K	10K	100K
47 ~ 150	0.40	0.75	0.90	1.00
220 ~ 560	0.50	0.85	0.94	1.00
680 ~ 1800	0.60	0.87	0.95	1.00
2200 ~ 3900	0.75	0.90	0.95	1.00
4700 ~ 8200	0.85	0.95	0.98	1.00

The endurance of capacitors is reduced 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.

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DIMENSIONS(mm)



ϕD	5	6.3	8	10	13	16	α
P	2.0	2.5	3.5	5.0	5.0	7.5	
ϕd	0.5	0.5	0.5	0.6	0.6	0.8	

(L < 16)	1.0
(L ≥ 16)	2.0

STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 105°C 100KHz ; IMP (Ω max)at 20°C,-10°C 100KHz.

Cap (μF)	V	6.3				10				16				
		Item	D x L	IMP		R.C.	D x L	IMP		R.C.	D x L	IMP		R.C.
				20°C	-10°C			20°C	-10°C			20°C	-10°C	
100										5x11	0.230	0.760	360	
150						5x11	0.230	0.760	360	6.3x11	0.100	0.330	450	
220		5x11	0.230	0.760	360	6.3x11	0.100	0.330	450	6.3x11	0.100	0.330	550	
330		6.3x11	0.100	0.330	460	6.3x11	0.100	0.330	550	8x12	0.059	0.181	830	
470		6.3x11	0.100	0.330	550	8x12	0.059	0.181	820	8x12	0.059	0.181	990	
680		8x12	0.059	0.181	900	8x12	0.059	0.181	990	8x16	0.046	0.143	1330	
820		8x12	0.059	0.181	990	10x13	0.043	0.133	1250	10x13	0.043	0.133	1360	
1000		10x13	0.043	0.133	1250	8x16	0.046	0.143	1330	8x20	0.031	0.105	1550	
1200		10x13	0.043	0.133	1360	10x13	0.043	0.133	1360	10x16	0.030	0.095	1815	
1500		8x16	0.046	0.143	1300	10x16	0.030	0.095	1650	10x20	0.019	0.057	1930	
1800		10x16	0.030	0.095	1815	10x16	0.030	0.095	1815	10x20	0.019	0.057	2160	
2200		10x20	0.019	0.057	2160	10x20	0.019	0.057	2160	10x25	0.017	0.051	2475	
2700		10x25	0.017	0.051	2475	10x25	0.017	0.051	2450	13x21	0.016	0.041	2725	
3300		13x21	0.016	0.041	2500	13x21	0.016	0.041	2475	13x21	0.016	0.041	2725	
3900		13x21	0.016	0.041	2725	13x21	0.016	0.041	2725	13x25	0.014	0.036	3190	
4700		13x25	0.014	0.036	3190	13x25	0.014	0.036	3190	13x30	0.012	0.031	3795	
5600		13x30	0.012	0.031	3795	13x30	0.012	0.031	3795	16x22	0.014	0.036	3575	
6800		13x35	0.011	0.029	3925	13x35	0.011	0.029	3925	16x26	0.012	0.033	3990	
8200		16x26	0.012	0.033	3990	16x26	0.012	0.033	3990					

Cap (μF)	V	25				35				
		Item	D x L	IMP		R.C.	D x L	IMP		R.C.
				20°C	-10°C			20°C	-10°C	
47						5x11	0.230	0.760	360	
68		5x11	0.230	0.760	360	6.3x11	0.100	0.330	450	
100		6.3x11	0.100	0.330	450	6.3x11	0.100	0.330	550	
150		8x12	0.085	0.260	620	8x12	0.059	0.181	820	
220		8x12	0.059	0.181	810	8x12	0.059	0.181	990	
270		8x12	0.059	0.181	900	8x16	0.046	0.143	1330	
330		8x12	0.059	0.181	990	10x13	0.043	0.133	1360	
390		8x16	0.046	0.143	1330	8x20	0.031	0.105	1550	
470		10x13	0.043	0.133	1360	10x16	0.030	0.095	1815	
560		8x20	0.032	0.110	1550	10x20	0.030	0.095	2160	
680		10x16	0.031	0.100	1815	10x25	0.027	0.080	2475	
820		10x20	0.020	0.062	2160	13x21	0.022	0.065	2725	
1000		10x25	0.018	0.055	2475	13x21	0.019	0.053	2920	
1200		13x21	0.017	0.049	2650	13x25	0.015	0.043	3190	
1500		13x21	0.023	0.059	2725	13x30	0.013	0.040	3795	
1800		13x25	0.020	0.051	3190	16x22	0.014	0.036	3575	
2200		13x30	0.018	0.046	3795	13x35	0.011	0.029	3925	
2700		16x22	0.014	0.036	3575	16x26	0.012	0.033	3990	
3300		13x35	0.015	0.029	3925					
		16x26	0.012	0.033	3990					

※ 13mm may be replaced by 12.5mm upon customer's request.