MGK Series

Features
- Endurance with ripple current: 105℃, 5,000 hours
- RoHS Compliance

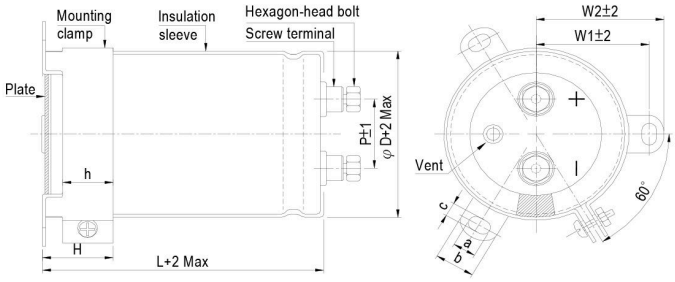


Sleeve & Marking Color: Black & Golden

Specifications

Items	Performance
Category Temperature Range	-25℃ ~ +105℃
Capacitance Tolerance	±20% (at 120Hz, 20℃)
Leakage Current (at 20℃)	$I = 3\sqrt{CV}$ or 5 (mA) whichever is smaller (after 5 minutes) Where, C= rated capacitance in μF V = rated DC working voltage in V
Tanδ (at 120 Hz, 20℃)	See the Dimensions & Permissible Ripple Current
Low Temperature Characteristics (at 120Hz)	Capacitance change : C(-25℃) / C(+20℃) ≧ 0.7
Endurance	Test Time: 5,000 Hrs Capacitance Change: Within ±20% of initial value Tanδ: Less than 200% of specified value Leakage Current: Within specified value * The above Specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with rated ripple current applied for 5,000 hours at 105℃.
Shelf Life Test	Test Time: 1,000 Hrs Capacitance Change: Within ±20% of initial value Tanδ: Less than 200% of specified value Leakage Current: Within specified value * The above Specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1).
Ripple Current & Frequency Multipliers	Frequency (Hz): 50 / 60 | 100 / 120 | 300 | 1k | 10k up Multiplier: 0.7 | 1.0 | 1.1 | 1.3 | 1.4
Ripple Current & Temperature Multipliers	Temperature (℃): 40 | 60 | 85 | 105 Multiplier: 2.44 | 2.16 | 2.00 | 1.00
Failure percentage Failure rate	≦ 3% (During useful life) 70 fit (70 10^{-9}/h)

Diagram of Dimensions



Unit: mm

ϕD	P	W1	W2	H	h	a	b	c
51	22.0	31.8	36.5	30	24	7	14.0	4.5
64	28.6	38.1	42.6	30	24	7	14.0	4.5
77	32.0	44.5	49.2	30	24	7	14.0	5.0
90	32.0	50.8	55.6	30	24	7	14.0	5.0

Screw Specifications:
Plus hexagon-headed screw: M5×0.8×10
Max. screw tightening torque: 3.23Nm

Dimension & Permissible Ripple Current

Working Voltage V. DC	Capacitance 120Hz, 20℃ μF	ϕD×L mm	Ripple Current 120 Hz, 105℃ A/rms	Tan δ at 120Hz, 20℃	ESR 120Hz, 20℃ mΩ	LC 5 minutes mA	Part Number
350	1,000	51 × 75	3.9	0.15	199	1.77	MGK102M2V--B075
	1,200	51 × 75	4.2	0.15	166	1.94	MGK122M2V--B075
	1,500	51 × 96	5.2	0.15	133	2.17	MGK152M2V--B096
	1,800	51 × 96	5.7	0.15	111	2.38	MGK182M2V--B096
	2,200	51 × 130	7.1	0.15	90.5	2.63	MGK222M2V--B130
	2,700	64 × 96	7.7	0.15	73.7	2.92	MGK272M2V--C096
	3,300	64 × 115	9.1	0.15	60.3	3.22	MGK332M2V--C115
	3,900	64 × 130	10.4	0.15	51.0	3.50	MGK392M2V--C130
	4,700	64 × 155	12.2	0.15	42.3	3.85	MGK472M2V--C155
	4,700	77 × 115	11.5	0.15	42.3	3.85	MGK472M2V--D115
	5,600	77 × 130	13.1	0.15	35.5	4.20	MGK562M2V--D130
	6,800	77 × 155	15.5	0.15	29.3	4.63	MGK682M2V--D155
	8,200	90 × 157	18.1	0.15	24.3	5.00	MGK822M2V--E157
	10,000	90 × 157	19.9	0.15	19.9	5.00	MGK103M2V--E157
400	1,000	51 × 75	3.9	0.15	199	1.90	MGK102M2G--B075
	1,200	51 × 96	4.6	0.15	166	2.08	MGK122M2G--B096
	1,500	51 × 115	5.6	0.15	133	2.32	MGK152M2G--B115
	1,800	51 × 130	6.4	0.15	111	2.55	MGK182M2G--B130
	2,200	64 × 96	6.9	0.15	90.5	2.81	MGK222M2G--C096
	2,700	64 × 115	8.2	0.15	73.7	3.12	MGK272M2G--C115
	3,300	64 × 130	9.5	0.15	60.3	3.45	MGK332M2G--C130
	3,900	64 × 155	11.1	0.15	51.0	3.75	MGK392M2G--C155
	3,900	77 × 115	10.4	0.15	51.0	3.75	MGK392M2G--D115
	4,700	77 × 130	12.0	0.15	42.3	4.11	MGK472M2G--D130
	5,600	77 × 155	14.0	0.15	35.5	4.49	MGK562M2G--D155
	6,800	90 × 157	16.5	0.15	29.3	4.95	MGK682M2G--E157
	8,200	90 × 157	18.1	0.15	24.3	5.00	MGK822M2G--E157
450	1,000	51 × 96	4.2	0.15	199	2.01	MGK102M2W--B096
	1,200	51 × 115	5.0	0.15	166	2.20	MGK122M2W--B115
	1,500	51 × 130	5.9	0.15	133	2.46	MGK152M2W--B130
	1,800	64 × 96	6.3	0.15	111	2.70	MGK182M2W--C096
	2,200	64 × 115	7.4	0.15	90.5	2.98	MGK222M2W--C115
	2,700	64 × 130	8.6	0.15	73.7	3.31	MGK272M2W--C130
	2,700	77 × 115	8.7	0.15	73.7	3.31	MGK272M2W--D115
	3,300	64 × 155	10.2	0.15	60.3	3.66	MGK332M2W--C155
	3,300	77 × 130	10.1	0.15	60.3	3.66	MGK332M2W--D130
	3,900	77 × 155	11.7	0.15	51.0	3.97	MGK392M2W--D155
	4,700	77 × 155	12.9	0.15	42.3	4.36	MGK472M2W--D155
	5,600	90 × 157	14.9	0.15	35.5	4.76	MGK562M2W--E157

Part Numbering System

MGK series	1000μF	±20%	350V	Plain case + Mounting clamp	M5 Post	51ϕ×75L	Pb-free Terminal + PVC Sleeve
MGK	**102**	**M**	**2V**	**-**	**-**	**B075**	
Series name	Capacitance	Capacitance tolerance	Rated voltage	Case Type	Terminal type	Case size	Terminal and Sleeve Type

Example:

Cap.	Symbol
1,000	102
3,300	332
10,000	103

M = ±20%
K = ±10%

Example:

WV	Symbol
350	2V
400	2G
450	2W

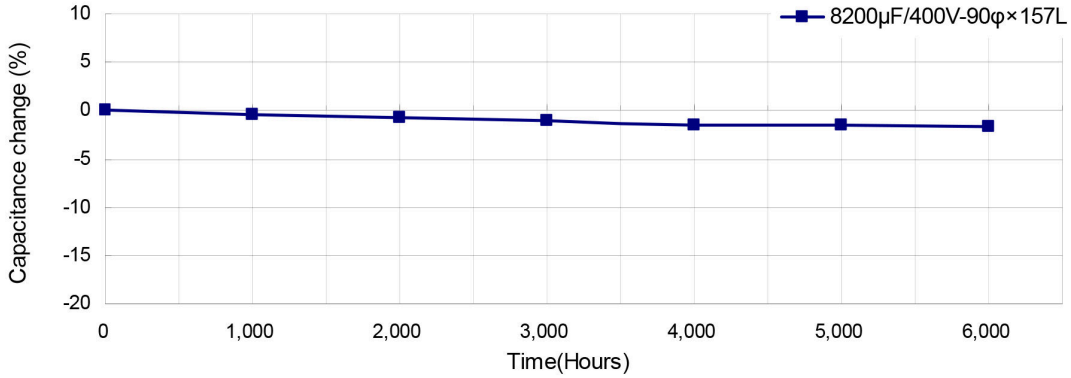
Example:

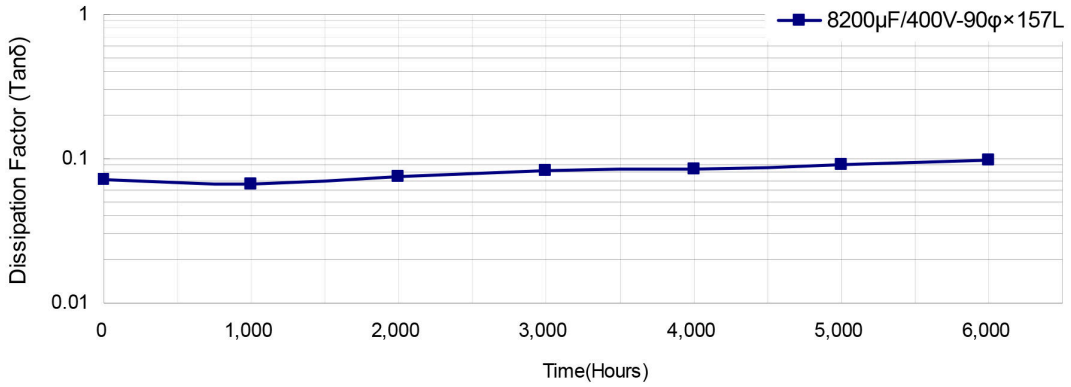
ϕD×L	Code
64×115	C115
77×130	D130
90×157	E157

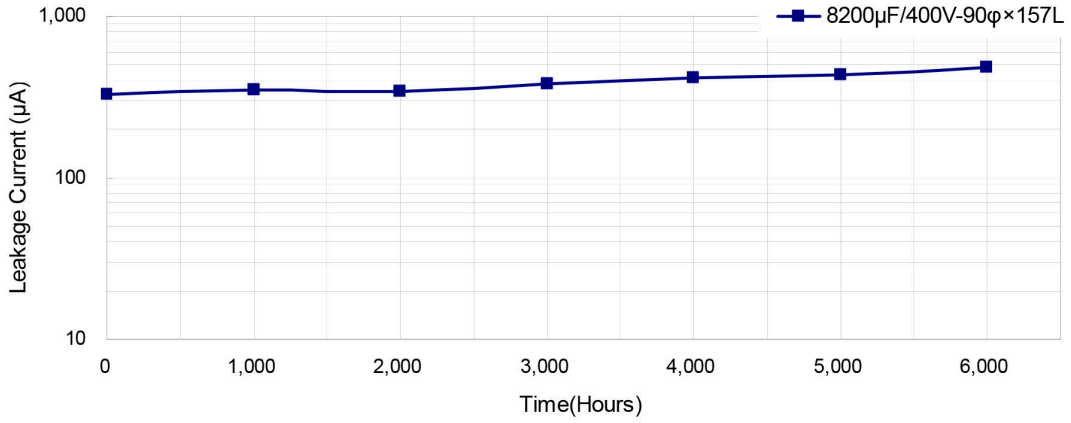
Note: For more details, please refer to “Part Numbering System (Screw Type)” on page 14.

All product specifications in the catalog are subject to change without notice. (CAT. 2014E1)

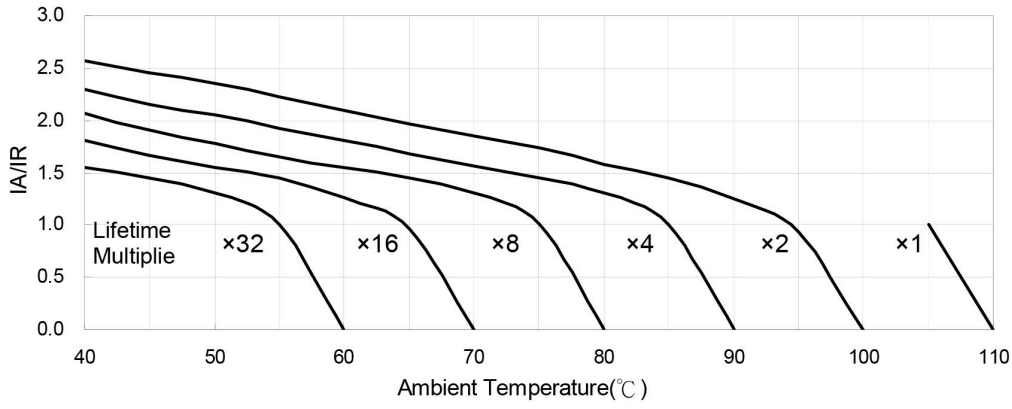
Typical Endurance Curves







Useful Life Chart



IA: Actual ripple current IR: Rated ripple current