

MGK Series

Features

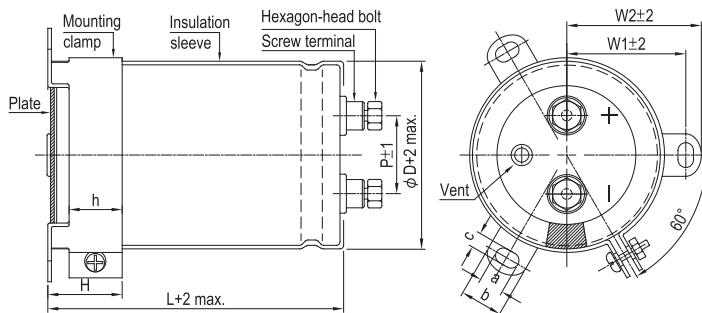
- Endurance with ripple current: 105°C, 5,000 hours
- RoHS compliant



Specifications

Items	Performance												
Category Temperature Range	-25°C ~ +105°C												
Capacitance Tolerance	±20% (at 120 Hz, 20°C)												
Leakage Current (at 20°C)	$I = 3\sqrt{CV}$ or 5 (mA) whichever is smaller (after 5 minutes) Where, C = rated capacitance in µF, V = rated DC Rated Voltage in V												
Tanδ (at 120 Hz, 20°C)	See the Dimensions & Permissible Ripple Current												
Low Temperature Characteristics (at 120 Hz)	Capacitance change : $C(-25°C) / C(+20°C) \geq 0.7$												
Endurance	<table border="1"> <tr> <td>Test Time</td> <td>5,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table>	Test Time	5,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value				
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Leakage Current	Within specified value												
* The above specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with rated ripple current applied for 5,000 hours at 105°C.													
Shelf Life Test	<table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table>	Test Time	1,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value				
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* The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C 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 and Frequency Multipliers	<table border="1"> <tr> <td>Frequency (Hz)</td> <td>50 / 60</td> <td>100 / 120</td> <td>300</td> <td>1k</td> <td>10k up</td> </tr> <tr> <td>Multiplier</td> <td>0.7</td> <td>1.0</td> <td>1.1</td> <td>1.3</td> <td>1.4</td> </tr> </table>	Frequency (Hz)	50 / 60	100 / 120	300	1k	10k up	Multiplier	0.7	1.0	1.1	1.3	1.4
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Multiplier	2.44	2.16	2.00	1.00									
Failure percentage Failure rate	When the failure percentage / failure rate is required, please contact with us for further discussion.												

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
63.5	28.6	38.1	42.6	30	24	7	14.0	4.5
76.2	32.0	44.5	49.2	30	24	7	14.0	5.0
89	32.0	50.8	55.6	30	24	7	14.0	5.0

Screw Specifications:

Plug hexagon-head screw: M5×0.8×10
Max. screw tightening torque: 3.23Nm

Dimension and Permissible Ripple Current

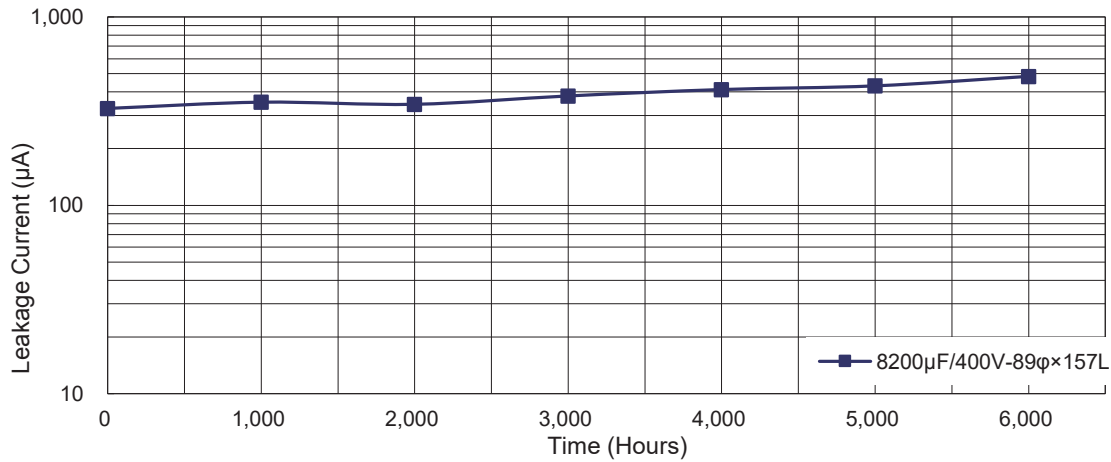
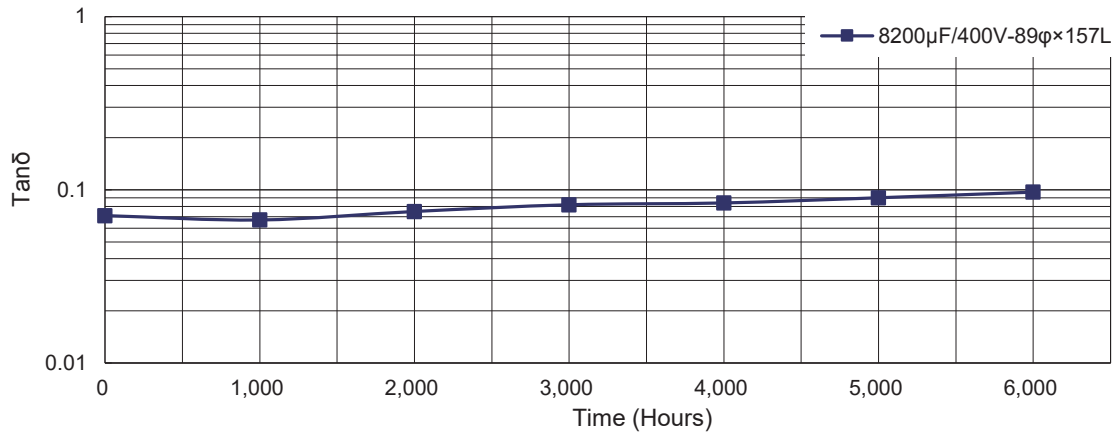
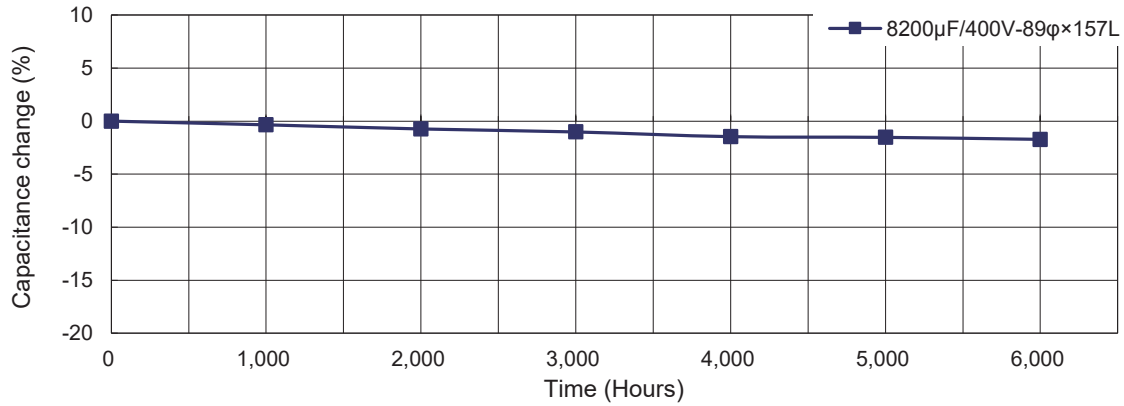
Rated Voltage V _{DC}	Capacitance 120 Hz, 20°C μF	φ D×L mm	Ripple Current 120 Hz, 105°C A/rms	Tan δ at 120 Hz, 20°C	ESR 120 Hz, 20°C mΩ	LC 5 minutes mA	Part Number
350	1,000	51 × 75	3.9	0.15	199	1.77	MGK102M2V--B075
	1,200	51 × 75	4.2	0.15	166	1.94	MGK122M2V--B075
	1,500	51 × 96	5.2	0.15	133	2.17	MGK152M2V--B096
	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	63.5 × 96	7.7	0.15	73.7	2.92	MGK272M2V--C096
	3,300	63.5 × 115	9.1	0.15	60.3	3.22	MGK332M2V--C115
	3,900	63.5 × 130	10.4	0.15	51.0	3.50	MGK392M2V--C130
	4,700	63.5 × 155	12.2	0.15	42.3	3.85	MGK472M2V--C155
	4,700	76.2 × 115	11.5	0.15	42.3	3.85	MGK472M2V--D115
	5,600	76.2 × 130	13.1	0.15	35.5	4.20	MGK562M2V--D130
	6,800	76.2 × 155	15.5	0.15	29.3	4.63	MGK682M2V--D155
	8,200	89 × 157	18.1	0.15	24.3	5.00	MGK822M2V--E157
10,000	89 × 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	63.5 × 96	6.9	0.15	90.5	2.81	MGK222M2G--C096
	2,700	63.5 × 115	8.2	0.15	73.7	3.12	MGK272M2G--C115
	3,300	63.5 × 130	9.5	0.15	60.3	3.45	MGK332M2G--C130
	3,900	63.5 × 155	11.1	0.15	51.0	3.75	MGK392M2G--C155
	3,900	76.2 × 115	10.4	0.15	51.0	3.75	MGK392M2G--D115
	4,700	76.2 × 130	12.0	0.15	42.3	4.11	MGK472M2G--D130
	5,600	76.2 × 155	14.0	0.15	35.5	4.49	MGK562M2G--D155
	6,800	89 × 157	16.5	0.15	29.3	4.95	MGK682M2G--E157
	8,200	89 × 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	63.5 × 96	6.3	0.15	111	2.70	MGK182M2W--C096
	2,200	63.5 × 115	7.4	0.15	90.5	2.98	MGK222M2W--C115
	2,700	63.5 × 130	8.6	0.15	73.7	3.31	MGK272M2W--C130
	2,700	76.2 × 115	8.7	0.15	73.7	3.31	MGK272M2W--D115
	3,300	63.5 × 155	10.2	0.15	60.3	3.66	MGK332M2W--C155
	3,300	76.2 × 130	10.1	0.15	60.3	3.66	MGK332M2W--D130
	3,900	76.2 × 155	11.7	0.15	51.0	3.97	MGK392M2W--D155
	4,700	76.2 × 155	12.9	0.15	42.3	4.36	MGK472M2W--D155
	5,600	89 × 157	14.9	0.15	35.5	4.76	MGK562M2W--E157

Part Numbering System

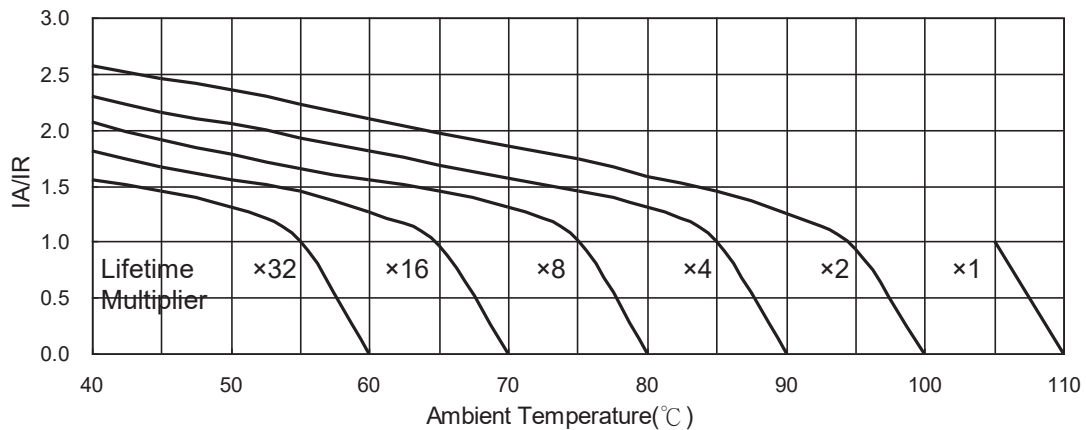
MGK Series	1000μF	±20%	350V	Plain case + Mounting clamp	M5 Post	51 φ × 75L	General Purpose
MGK	102	M	2V	-	-	B075	
Series Name	Capacitance	Capacitance tolerance	Rated voltage	Case Type	Terminal type	Case size	Application
Example:	Example:	Example:	Example:	Example:	Example:	Example:	
Cap.	Symbol	M = ±20% K = ±10%	Voltage	Symbol	φ D×L	Code	
1,000	102		350	2V	63.5×115	C115	
3,300	332		400	2G	76.2×130	D130	
10,000	103		450	2W	89 × 157	E157	

Note: For more details, please refer to "Part Numbering System - Screw Type" on page 240.

Typical Endurance Curves



Useful Life Chart



IA: Actual ripple current IR: Rated ripple current