MEQ Series

Features

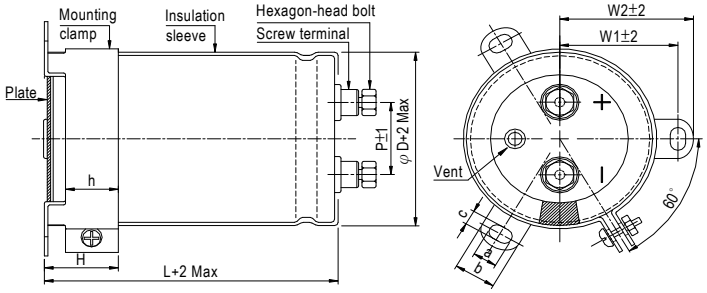
- Endurance with ripple current: 85℃, 20,000 hours
- RoHS Compliance

Sleeve & Marking Color: Black & Golden

Specifications

Items	Performance
Category Temperature Range	-25℃ ~ +85℃
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: 20,000 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 20,000 hours at 85℃.
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 85℃ 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 Multiplier: 2.44 | 2.16 | 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, 85℃ A/rms	Tan δ at 120Hz, 20℃	ESR 120Hz, 20℃ mΩ	LC 5 minutes mA	Part Number
350	1,000	51 × 75	3.8	0.15	199	1.77	MEQ102M2V--B075
	1,200	51 × 75	4.2	0.15	166	1.94	MEQ122M2V--B075
	1,500	51 × 96	5.2	0.15	133	2.17	MEQ152M2V--B096
	1,800	51 × 96	5.6	0.15	111	2.38	MEQ182M2V--B096
	2,200	51 × 110	6.6	0.15	90.4	2.63	MEQ222M2V--B110
	2,200	51 × 130	7.1	0.15	90.4	2.63	MEQ222M2V--B130
	2,700	51 × 130	7.9	0.15	73.7	2.92	MEQ272M2V--B130
	2,700	64 × 90	7.3	0.15	73.7	2.92	MEQ272M2V--C090
	2,700	64 × 96	7.6	0.15	73.7	2.92	MEQ272M2V--C096
	3,300	51 × 150	9.4	0.15	60.3	3.22	MEQ332M2V--B150
	3,300	64 × 100	8.5	0.15	60.3	3.22	MEQ332M2V--C100
	3,300	64 × 115	9.0	0.15	60.3	3.22	MEQ332M2V--C115
	3,900	64 × 110	9.6	0.15	51.0	3.50	MEQ392M2V--C110
	3,900	64 × 130	10.3	0.15	51.0	3.50	MEQ392M2V--C130
	3,900	77 × 90	9.4	0.15	51.0	3.50	MEQ392M2V--D090
	4,700	64 × 130	11.4	0.15	42.3	3.85	MEQ472M2V--C130
	4,700	64 × 155	12.2	0.15	42.3	3.85	MEQ472M2V--C155
	4,700	77 × 100	10.8	0.15	42.3	3.85	MEQ472M2V--D100
	4,700	77 × 115	11.5	0.15	42.3	3.85	MEQ472M2V--D115
	5,600	64 × 150	13.3	0.15	35.5	4.20	MEQ562M2V--C150
	5,600	64 × 170	14.0	0.15	35.5	4.20	MEQ562M2V--C170
	5,600	64 × 195	15.0	0.15	35.5	4.20	MEQ562M2V--C195
	5,600	77 × 110	12.2	0.15	35.5	4.20	MEQ562M2V--D110
	5,600	77 × 130	13.1	0.15	35.5	4.20	MEQ562M2V--D130
	6,800	64 × 190	16.3	0.15	29.3	4.63	MEQ682M2V--C190
	6,800	77 × 130	14.3	0.15	29.3	4.63	MEQ682M2V--D130
	6,800	77 × 155	15.5	0.15	29.3	4.63	MEQ682M2V--D155
	8,200	77 × 150	16.7	0.15	24.3	5.00	MEQ822M2V--D150
	8,200	77 × 170	17.7	0.15	24.3	5.00	MEQ822M2V--D170
	8,200	90 × 130	16.6	0.15	24.3	5.00	MEQ822M2V--E130
	8,200	90 × 157	18.1	0.15	24.3	5.00	MEQ822M2V--E157
	10,000	90 × 150	19.5	0.15	19.9	5.00	MEQ103M2V--E150
	10,000	90 × 155	19.8	0.15	19.9	5.00	MEQ103M2V--E155
	10,000	90 × 157	19.9	0.15	19.9	5.00	MEQ103M2V--E157
	12,000	90 × 150	21.4	0.15	16.6	5.00	MEQ123M2V--E150
	12,000	90 × 190	23.7	0.15	16.6	5.00	MEQ123M2V--E190
	12,000	90 × 196	24.0	0.15	16.6	5.00	MEQ123M2V--E196
	15,000	90 × 190	26.5	0.15	13.3	5.00	MEQ153M2V--E190
	15,000	90 × 236	29.2	0.15	13.3	5.00	MEQ153M2V--E236
	18,000	90 × 220	31.0	0.15	11.1	5.00	MEQ183M2V--E220
400	1,000	51 × 75	3.8	0.15	199	1.90	MEQ102M2G--B075
	1,200	51 × 96	4.6	0.15	166	2.08	MEQ122M2G--B096
	1,500	51 × 100	5.2	0.15	133	2.32	MEQ152M2G--B100
	1,500	51 × 115	5.5	0.15	133	2.32	MEQ152M2G--B115
	1,800	51 × 110	6.0	0.15	111	2.55	MEQ182M2G--B110
	1,800	51 × 130	6.4	0.15	111	2.55	MEQ182M2G--B130
	2,200	64 × 90	6.6	0.15	90.4	2.81	MEQ222M2G--C090
	2,200	51 × 130	7.1	0.15	90.4	2.81	MEQ222M2G--B130
	2,200	64 × 96	6.9	0.15	90.4	2.81	MEQ222M2G--C096
	2,700	64 × 110	8.0	0.15	73.7	3.12	MEQ272M2G--C110
	2,700	64 × 115	8.2	0.15	73.7	3.12	MEQ272M2G--C115
	2,700	77 × 90	7.7	0.15	73.7	3.12	MEQ272M2G--D090
	3,300	64 × 130	9.5	0.15	60.3	3.45	MEQ332M2G--C130
	3,300	77 × 100	9.0	0.15	60.3	3.45	MEQ332M2G--D100
	3,900	64 × 150	11.0	0.15	51.0	3.75	MEQ392M2G--C150
	3,900	64 × 155	11.1	0.15	51.0	3.75	MEQ392M2G--C155
	3,900	77 × 100	9.7	0.15	51.0	3.75	MEQ392M2G--D100
	3,900	77 × 115	10.4	0.15	51.0	3.75	MEQ392M2G--D115
	4,700	64 × 170	12.8	0.15	42.3	4.11	MEQ472M2G--C170
	4,700	64 × 195	13.6	0.15	42.3	4.11	MEQ472M2G--C195
	4,700	77 × 130	12.0	0.15	42.3	4.11	MEQ472M2G--D130
	5,600	64 × 190	14.7	0.15	35.5	4.49	MEQ562M2G--C190
	5,600	64 × 195	14.8	0.15	35.5	4.49	MEQ562M2G--C195
	5,600	77 × 150	14.2	0.15	35.5	4.49	MEQ562M2G--D150
	5,600	77 × 155	14.4	0.15	35.5	4.49	MEQ562M2G--D155
	6,800	77 × 170	16.5	0.15	29.3	4.95	MEQ682M2G--D170

Dimension & Permissible Ripple Current

Working Voltage V. DC	Capacitance 120Hz, 20℃ μF	ϕD×L mm	Ripple Current 120 Hz, 85℃ A/rms	Tan δ at 120Hz, 20℃	ESR 120Hz, 20℃ mΩ	LC 5 minutes mA	Part Number
400	6,800	90 × 130	15.3	0.15	29.3	4.95	MEQ682M2G--E130
	6,800	90 × 157	16.5	0.15	29.3	4.95	MEQ682M2G--E157
	8,200	77 × 190	19.1	0.15	24.3	5.00	MEQ822M2G--D190
	8,200	90 × 150	17.8	0.15	24.3	5.00	MEQ822M2G--E150
	8,200	90 × 155	18.1	0.15	24.3	5.00	MEQ822M2G--E155
	8,200	90 × 157	18.1	0.15	24.3	5.00	MEQ822M2G--E157
	10,000	77 × 220	22.5	0.15	19.9	5.00	MEQ103M2G--D220
	10,000	90 × 170	20.8	0.15	19.9	5.00	MEQ103M2G--E170
	10,000	90 × 190	21.8	0.15	19.9	5.00	MEQ103M2G--E190
	10,000	90 × 196	22.1	0.15	19.9	5.00	MEQ103M2G--E196
	12,000	90 × 190	23.9	0.15	16.6	5.00	MEQ123M2G--E190
	12,000	90 × 236	26.4	0.15	16.6	5.00	MEQ123M2G--E236
450	1,000	51 × 96	4.2	0.15	199	2.01	MEQ102M2W--B096
	1,200	51 × 100	4.7	0.15	166	2.20	MEQ122M2W--B100
	1,200	51 × 115	5.0	0.15	166	2.20	MEQ122M2W--B115
	1,500	51 × 130	5.8	0.15	133	2.46	MEQ152M2W--B130
	1,800	64 × 96	6.2	0.15	111	2.70	MEQ182M2W--C096
	2,200	64 × 110	7.2	0.15	90.4	2.98	MEQ222M2W--C110
	2,200	64 × 115	7.4	0.15	90.4	2.98	MEQ222M2W--C115
	2,200	77 × 90	7.0	0.15	90.4	2.98	MEQ222M2W--D090
	2,700	64 × 130	8.6	0.15	73.7	3.31	MEQ272M2W--C130
	2,700	77 × 100	8.2	0.15	73.7	3.31	MEQ272M2W--D100
	2,700	77 × 115	8.7	0.15	73.7	3.31	MEQ272M2W--D115
	3,300	64 × 150	10.1	0.15	60.3	3.66	MEQ332M2W--C150
	3,300	64 × 155	10.2	0.15	60.3	3.66	MEQ332M2W--C155
	3,300	77 × 100	9.0	0.15	60.3	3.66	MEQ332M2W--D100
	3,300	77 × 130	10.0	0.15	60.3	3.66	MEQ332M2W--D130
	3,900	64 × 170	11.6	0.15	51.0	3.97	MEQ392M2W--C170
	3,900	64 × 195	12.4	0.15	51.0	3.97	MEQ392M2W--C195
	3,900	77 × 130	10.8	0.15	51.0	3.97	MEQ392M2W--D130
	3,900	77 × 155	11.7	0.15	51.0	3.97	MEQ392M2W--D155
	4,700	64 × 190	13.4	0.15	42.3	4.36	MEQ472M2W--C190
	4,700	77 × 150	12.7	0.15	42.3	4.36	MEQ472M2W--D150
	4,700	77 × 155	12.9	0.15	42.3	4.36	MEQ472M2W--D155
	5,600	77 × 170	14.6	0.15	35.5	4.76	MEQ562M2W--D170
	5,600	77 × 190	15.4	0.15	35.5	4.76	MEQ562M2W--D190
	5,600	77 × 195	15.6	0.15	35.5	4.76	MEQ562M2W--D195
	5,600	90 × 150	14.6	0.15	35.5	4.76	MEQ562M2W--E150
	5,600	90 × 155	14.8	0.15	35.5	4.76	MEQ562M2W--E155
	5,600	90 × 157	14.9	0.15	35.5	4.76	MEQ562M2W--E157
	6,800	77 × 190	16.9	0.15	29.3	5.00	MEQ682M2W--D190
	6,800	90 × 150	16.1	0.15	29.3	5.00	MEQ682M2W--E150
	6,800	90 × 170	17.0	0.15	29.3	5.00	MEQ682M2W--E170
	6,800	90 × 196	18.1	0.15	29.3	5.00	MEQ682M2W--E196
	8,200	77 × 220	19.9	0.15	24.3	5.00	MEQ822M2W--D220
	8,200	90 × 170	18.7	0.15	24.3	5.00	MEQ822M2W--E170
	8,200	90 × 190	19.6	0.15	24.3	5.00	MEQ822M2W--E190
	8,200	90 × 196	19.9	0.15	24.3	5.00	MEQ822M2W--E196
	10,000	90 × 190	21.6	0.15	19.9	5.00	MEQ103M2W--E190
	10,000	90 × 236	23.9	0.15	19.9	5.00	MEQ103M2W--E236

Part Numbering System

MEQ series	1000μF	±20%	350V	Plain case + Mounting clamp	M5 Post	51ϕ×75L	Pb-free Terminal + PVC Sleeve
MEQ	**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
6,800	682
10,000	103

M = ±20%
K = ±10%

Example:

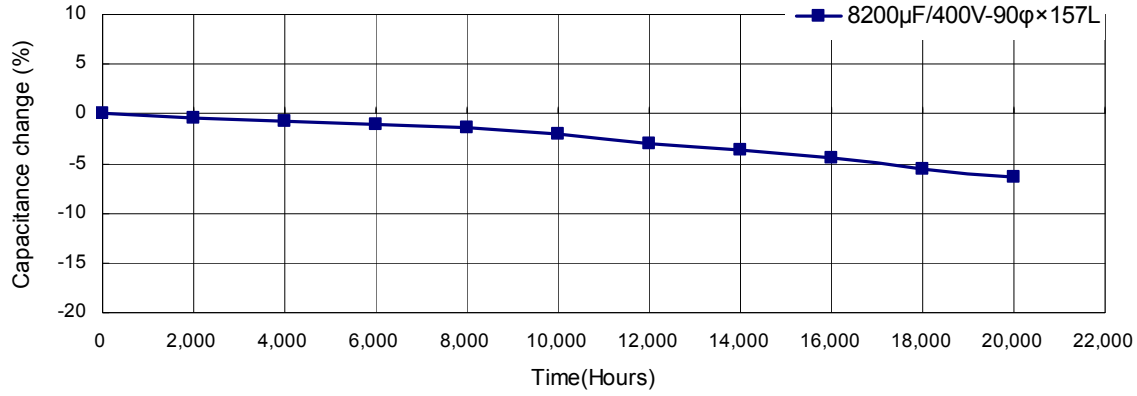
WV	Symbol
350	2V
400	2G
450	2W

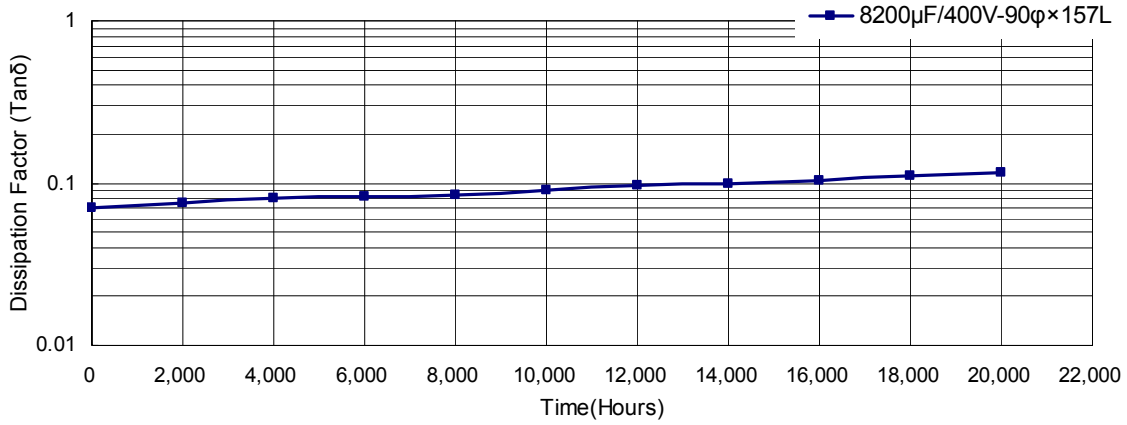
Example:

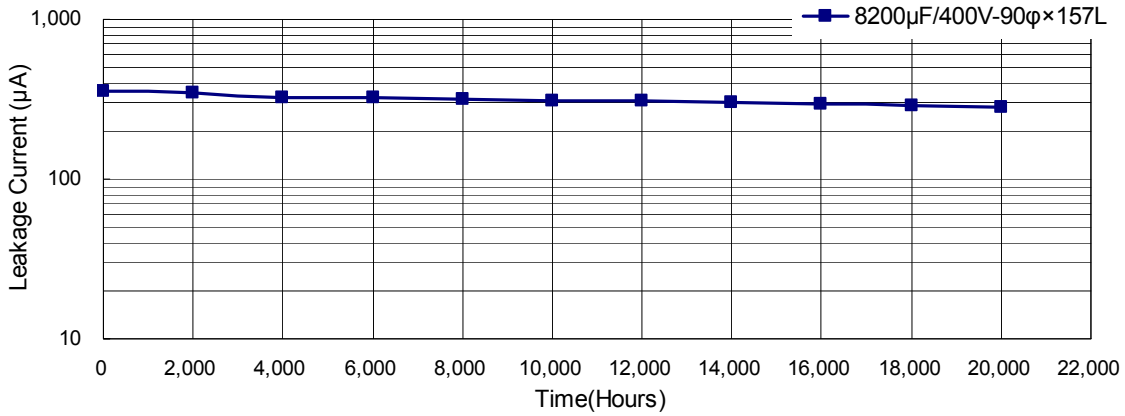
ϕD×L	Code
64×115	C115
77×130	D130
90×157	E157

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

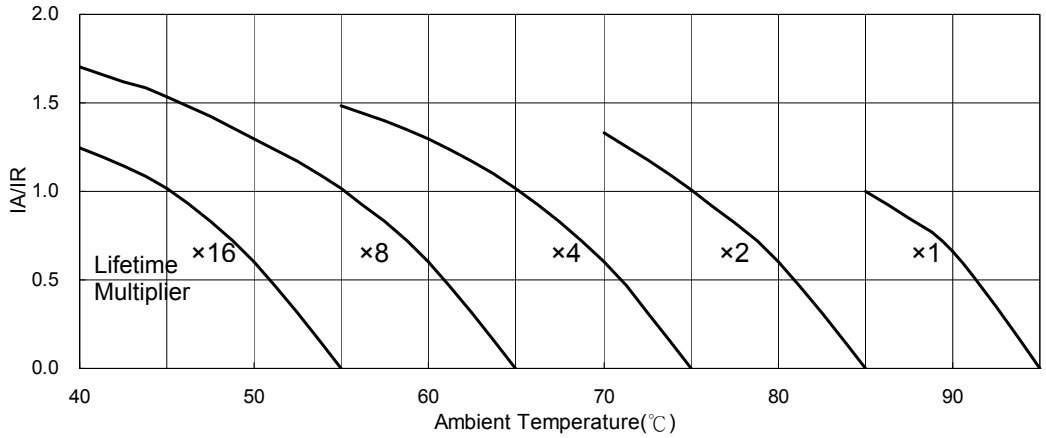
Typical Endurance Curves







Useful Life Chart



IA: Actual ripple current IR: Rated ripple current