

M7 series

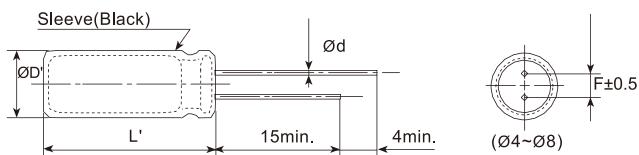
- Standard miniature series with 7mm height
- Endurance: +85°C 1,000 hours
- RoHS Compliant



SPECIFICATIONS

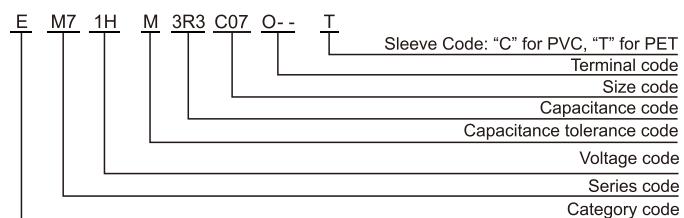
Items	Characteristics								
Category Temperature Range	-40~+85°C								
Rated Voltage Range	4~100 V _{dc}								
Capacitance Tolerance	$\pm 20\%$ (M) (at 20°C, 120Hz)								
Leakage Current	I < 0.01CV or 3μA, whichever is greater. Where, I:Max.leakage current (μA), C:Nominal capacitance (μF), V: Rated voltage (V) (at 20°C after 2 minutes)								
Dissipation Factor (tanδ)	Rated Voltage(V _{dc})	4	6.3	10	16	25	35	50	63
	tanδ (max.)	0.35	0.24	0.20	0.16	0.14	0.12	0.10	0.08
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(V _{dc})	4	6.3	10	16	25	35	50	63
	Z(-25°C)/Z(+20°C)	6	4	3				2	
	Z(-40°C)/Z(+20°C)	16	10	8	6			4	
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 85°C.								
	Capacitance Change	$\leq \pm 20\%$ of the initial value							
	D.F. (tanδ)	$\leq 200\%$ of the initial specified value							
	Leakage Current	\leq The initial specified value							
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 85°C without voltage applied.								
	Capacitance Change	$\leq \pm 20\%$ of the initial value							
	D.F. (tanδ)	$\leq 200\%$ of the initial specified value							
	Leakage Current	$\leq 200\%$ of the initial specified value							

DIMENSIONS[mm]



ØD	4	5	6.3	8
Ød	0.45	0.45	0.5	0.5
F	1.5	2.0	2.5	3.5
ØD'	$\text{ØD}+0.5\text{max.}$			
L'	$L+1.5\text{max.}$			

PART NUMBERING SYSTEM



Radial Type

RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

WV(V _{dc})	Freq.(Hz)	50/60	120	1k	10k-100k
4 to 16	0.80	1.00	1.10	1.20	
25 to 35	0.80	1.00	1.50	1.70	
≥ 50	0.80	1.00	1.60	1.90	

The endurance of capacitors is shortened 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.

M7 series

■ STANDARD RATINGS

WV (Vdc)	Cap (μ F)	Size DxL(mm)	$\tan\delta$	Rated ripple current (mArms/85°C, 120Hz)	Part Number
4(0G)	33	4x7	0.35	35	EM70GM330C07OT
	47	4x7	0.35	40	EM70GM470C07OT
	100	5x7	0.35	70	EM70GM101D07OT
	220	6.3x7	0.35	120	EM70GM221E07OT
	330	8x7	0.35	170	EM70GM331F07OT
6.3(0J)	22	4x7	0.24	35	EM70JM220C07OT
	33	4x7	0.24	40	EM70JM330C07OT
	47	4x7	0.24	50	EM70JM470C07OT
	100	5x7	0.24	80	EM70JM101D07OT
	220	6.3x7	0.24	140	EM70JM221E07OT
	330	8x7	0.24	205	EM70JM331F07OT
10(1A)	22	4x7	0.20	35	EM71AM220C07OT
	33	4x7	0.20	45	EM71AM330C07OT
	47	5x7	0.20	60	EM71AM470D07OT
	100	6.3x7	0.20	108	EM71AM101E07OT
	220	8x7	0.20	185	EM71AM221F07OT
16(1C)	10	4x7	0.16	35	EM71CM100C07OT
	22	4x7	0.16	40	EM71CM220C07OT
	33	5x7	0.16	55	EM71CM330D07OT
	47	5x7	0.16	70	EM71CM470D07OT
	100	6.3x7	0.16	120	EM71CM101E07OT
	220	8x7	0.16	205	EM71CM221F07OT
25(1E)	3.3	4x7	0.14	15	EM71EM3R3C07OT
	4.7	4x7	0.14	20	EM71EM4R7C07OT
	10	4x7	0.14	30	EM71EM100C07OT
	22	5x7	0.14	50	EM71EM220D07OT
	33	6.3x7	0.14	70	EM71EM330E07OT
	47	6.3x7	0.14	85	EM71EM470E07OT
	100	8x7	0.14	145	EM71EM101F07OT
35(1V)	3.3	4x7	0.12	15	EM71VM3R3C07OT
	4.7	4x7	0.12	20	EM71VM4R7C07OT
	10	4x7	0.12	30	EM71VM100C07OT
	22	5x7	0.12	55	EM71VM220D07OT
	33	6.3x7	0.12	75	EM71VM330E07OT
	47	8x7	0.12	110	EM71VM470F07OT
50(1H)	0.1	4x7	0.10	4	EM71HMR10C07OT
	0.22	4x7	0.10	5	EM71HMR22C07OT
	0.33	4x7	0.10	7	EM71HMR33C07OT
	0.47	4x7	0.10	8	EM71HMR47C07OT
	1	4x7	0.10	10	EM71HM010C07OT
	2.2	4x7	0.10	15	EM71HM2R2C07OT
	3.3	4x7	0.10	20	EM71HM3R3C07OT
	4.7	4x7	0.10	24	EM71HM4R7C07OT
	10	5x7	0.10	40	EM71HM100D07OT
	22	6.3x7	0.10	70	EM71HM220E07OT
	33	8x7	0.10	100	EM71HM330F07OT
63(1J)	0.1	4x7	0.08	4	EM71JMR10C07OT
	0.22	4x7	0.08	6	EM71JMR22C07OT
	0.33	4x7	0.08	7	EM71JMR33C07OT
	0.47	4x7	0.08	8	EM71JMR47C07OT
	1	4x7	0.08	10	EM71JM010C07OT
	2.2	4x7	0.08	15	EM71JM2R2C07OT
	3.3	4x7	0.08	23	EM71JM3R3C07OT
	4.7	5x7	0.08	30	EM71JM4R7D07OT
	10	6.3x7	0.08	50	EM71JM100E07OT
100(1K)	1	4x7	0.08	12	EM71KM010C07OT
	2.2	5x7	0.08	20	EM71KM2R2D07OT
	3.3	6.3x7	0.08	30	EM71KM3R3E07OT
	4.7	6.3x7	0.08	35	EM71KM4R7E07OT