Koshin

MRF Surface Mount Aluminum Electrolytic Capacitors

Vertical SMD Type, Long Life and High Reliability Capacitors

For LCD MT/TV

Guaranteed 10000 hours at 105℃

RoHS compliant

Halogen–free

Photo

Marking color：Blue

Specifications

No.	Item	Performance						
1	Temperature range(℃)	-40 to +105						
2	Rated Voltage Range	6.3-50VDC						
3	Leakage current (μA)	Rated Voltage (VDC)	6.3-50					
		0.01CV or 3uA,whichever is greater (at 20℃, 2minutes)						
4	Capacitance tolerance (%)	±20 (20℃,120Hz)						
5	Tangent of the loss angle (Tan δ)	Rated voltage(V)	6.3	10	16	25	35	50
		Tanδ(max)	0.30	0.26	0.22	0.16	0.14	0.14
		0.02 is added to each 1000uF increase over 1000uF (20℃,120Hz)						
6	Low temperature characteristics Impedance ratio (max)	Rated voltage(V)	6.3	10	16	25	35	50
		$Z_{(-10℃)}/Z_{(+20℃)}$	4	3	2	2	2	2
7	Endurance (105℃) (Applied ripple current)	Test time	The following specifications shall be satisfied when the capacitors are restores to 20℃ after the rated voltage is applied for 10,000 hours at 105℃.					
		Rated Voltage(VDC)	6.3-50					
		Leakage current	The initial specified value or less					
		Percentage of capacitance change	Within ±30% of initial value					
		Tangent of the loss angle	300% or less of the initial specified value					
8	Shelf life (105℃)	Test time	The following specifications shall be satisfied when the capacitors are restores to 20℃ after exposing them for 1000 hours at105℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum for 30 minutes, at least 24 hours and not more than 48 hours before the measurements.					
		Rated Voltage(VDC)	6.3-50					
		Leakage current	The initial specified value or less					
		Percentage of capacitance change	Within ±30% of initial value					
		Tangent of the loss angle	300% or less of the initial specified value					

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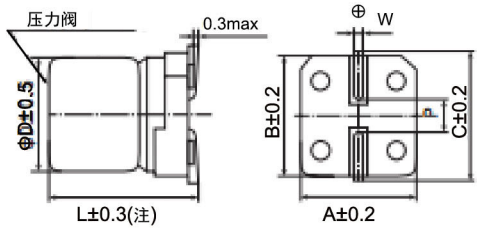
Dimensions

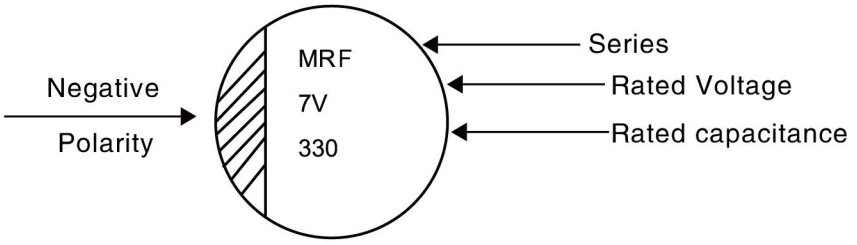


:Dummy terminals

Note1:L±0.5 for 8x9(F090)-10x10.5(G105)

Case Code	D	L	A	B	C	W	P
C070	5	7.0	5.3	5.3	5.9	0.5-0.8	1.4
E070	6.3	7.0	6.6	6.6	7.2	0.5-0.8	1.9
E090	6.3	9.0	6.6	6.6	7.2	0.5-0.8	1.9
F105	8	10.5	8.3	8.3	9.0	0.7-1.1	3.1
G105	10	10.5	10.3	10.3	11.0	0.7-1.1	4.7

Marking



Coefficient of Frequency for Ripple Current

Frequency (Hz) / capacitance(uF)	120	1K	10K	100K
10 to 150	0.4	0.75	0.9	1.0
220 to 470	0.5	0.85	0.94	1.0

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use,the rms ripple current has to be reduced.

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DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 100KHz,105℃

V.DC / Contents μF	6.3V			10V			16V			25V		
	ΦDXL	Impedance Ω/100KHz 20℃	Ripple Current (mA/rms,105℃)	ΦDXL	Impedance Ω/100KHz 20℃	Ripple Current (mA/rms,105℃)	ΦDXL	Impedance Ω/100KHz 20℃	Ripple Current (mA/rms,105℃)	ΦDXL	Impedance Ω/100KHz 20℃	Ripple Current (mA/rms,105℃)
22							5X7	2.2	95	5X7	2.2	95
33				5X7	2.2	95				6.3X7	1.1	140
47	5X7	2.2	95				6.3X7	1.1	140	6.3X7	1.1	140
100	6.3X7	1.1	140				6.3X7	1.1	140	6.3X9	1.0	230
150				6.3X7	1.1	140	6.3X9	1.0	230			
220	6.3X9	1.0	230				6.3X9	1.0	230	8X10.5	0.22	600
330	6.3X9	1.0	230				8X10.5	0.22	600	10X10.5	0.16	850
470	8X10.5	0.22	600				10X10.5	0.16	850			

V.DC / Contents μF	35V			50V		
	ΦDXL	Impedance Ω/100KHz 20℃	Ripple Current (mA/rms,105℃)	ΦDXL	Impedance Ω/100KHz 20℃	Ripple Current (mA/rms,105℃)
10	5X7	2.2	95			
10	6.3X7	1.1	140			
22	5X7	2.2	95			
22	6.3X7	1.1	140			
33	6.3X9	1.0	230			
47	6.3X9	1.0	230	8x10.5	0.53	350
100	8X10.5	0.22	600	10X10.5	0.35	670

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