

Aluminum Electrolytic Capacitors

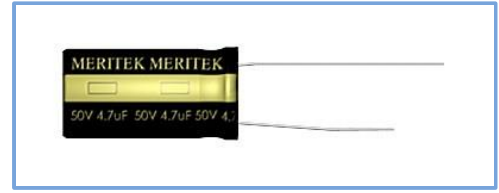


REM Series
(105°C, 7mmL, Low Impedance)

MERITEK

FEATURES

- High ripple current, low impedance series with 7mm height.



SPECIFICATIONS

Item	Characteristic							
Operating Temp Range	- 55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	± 20%(M)							
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) * Whichever is greater after 3 minutes				I : Leakage Current (μA) C : Rated Capacitance(μF) V : Working Voltage (V)			
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	3	3	3	2	2	2	
	-55°C / +20°C	6	6	6	4	4	4	
Load Life	After 1000 hours application of W.V. and +105°C ripple current value , the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rated working voltage)							
	Capacitance Change	≤ ±20% of initial.						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage Current	≤ initial specified value						
Shelf Life	At +105°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)							

PART NUMBER SYSTEM

REM 10V 151 M TA 8x7

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Rated Voltage

Capacitance

Express in micro farad(μF), First two digits are significant figures, Third digit denotes number of zeros. 'R' denotes decimal point for values less than 10μF

Tolerance

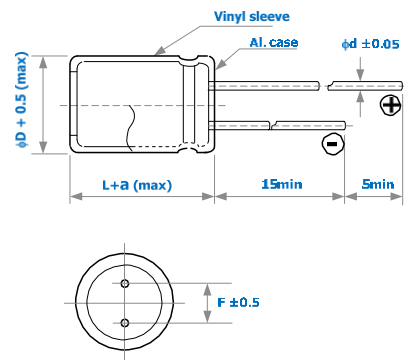
M - ±20%

Package

Code	TA	TR	Blank
	Tape & Ammo	Tape & Reel	

Case size - (D) Diameter x (L) Length in mm (Optional)

DIMENSIONS (mm)



φD	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45	0.45	0.45	0.50
a	1.0	1.0	1.0	1.0

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RIPPLE CURRENT COEFFICIENTS

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
6.3~16V	0.45	0.60	0.83	0.94	0.98	1.00
25~35V	0.38	0.50	0.75	0.90	0.97	1.00
50V	0.36	0.46	0.70	0.88	0.94	1.00

Temperature(°C)	65	75	85	95	105
Multiplier	2.12	1.92	1.69	1.50	1.00

CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
 Max. impedance : Ω 100kHz
 Max. ripple current : mA(rms) 105°C 100kHz

Cap. (uF)	V Item	6.3				10			
		DxL	IMP.		R.C.	DxL	IMP.		R.C.
			20°C	-10°C			20°C	-10°C	
15					→	4x7	1.592	4.775	80
22	4x7		1.191	3.572	80	4x7	1.184	3.552	95
27	4x7		1.051	3.153	90	4x7	1.045	3.135	100
33	4x7		0.926	2.778	100	4x7	0.921	2.763	110
39	4x7		0.839	2.518	110	5x7	0.835	2.505	140
47	5x7		0.629	1.886	130	5x7	0.568	1.705	160
56	5x7		0.561	1.682	150	5x7	0.507	1.521	170
68	5x7		0.489	1.467	160	6.3x7	0.442	1.326	210
82	6.3x7		0.450	1.351	200	6.3x7	0.407	1.222	230
100	6.3x7		0.406	1.219	220	6.3x7	0.367	1.102	260
120	6.3x7		0.346	1.039	250	6.3x7	0.313	0.939	280
150	6.3x7		0.283	0.850	280	8x7	0.256	0.768	370
180	8x7		0.246	0.739	350				
220	8x7		0.210	0.630	390				

Cap. (uF)	V Item	16				25			
		DxL	IMP.		R.C.	DxL	IMP.		R.C.
			20°C	-10°C			20°C	-10°C	
10	4x7		1.416	4.249	75	4x7	1.332	3.995	95
15	4x7		1.039	3.116	90	4x7	0.977	2.930	110
18	4x7		0.897	2.692	100	5x7	0.851	2.552	140
22	4x7		0.772	2.317	100	5x7	0.726	2.179	150
27	5x7		0.682	2.046	130	6.3x7	0.641	1.923	190
33	5x7		0.601	1.802	140	6.3x7	0.565	1.695	210
39	6.3x7		0.545	1.634	180	6.3x7	0.512	1.537	220
47	6.3x7		0.482	1.446	190	6.3x7	0.453	1.360	250
56	6.3x7		0.430	1.290	210	8x7	0.404	1.213	310
68	6.3x7		0.375	1.125	230	8x7	0.352	1.057	340
82	6.3x7		0.345	1.036	260				
100	6.3x7		0.312	0.935	280				

All blank voltage on sleeve marking is the same voltage as “→” point to.

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CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
 Max. Impedance : Ω 100kHz
 Max. ripple current : mA(rms) 105°C 100kHz

Cap. (μ F)	V Item	35				50			
		DxL	IMP.		R.C.	DxL	IMP.		R.C.
			20°C	-10°C			20°C	-10°C	
4.7	4x7	4x7	2.760	8.280	70	4x7	2.758	8.274	90
6.8	4x7	4x7	2.385	7.154	80	5x7	2.383	7.149	110
10	5x7	5x7	0.998	2.994	110	6.3x7	0.499	1.496	150
15	5x7	5x7	0.732	2.195	140	6.3x7	0.366	1.097	180
18	6.3x7	6.3x7	0.638	1.913	170	6.3x7	0.319	0.956	200
22	6.3x7	6.3x7	0.544	1.633	180	8x7	0.272	0.816	240
27	6.3x7	6.3x7	0.480	1.441	200	8x7	0.240	0.720	270
33	8x7	8x7	0.423	1.270	250	8x7	0.212	0.635	290
39	8x7	8x7	0.384	1.151	270				
47	8x7	8x7	0.340	1.019	300				

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TAPING SPECIFICATION

- Lead taping is designed for automatic insertion equipment.
- Capacitors with case size of 18mm x 35.5mm or smaller are available in taping type.

DIMENSIONS (Ø4~ Ø10)

Item	Symbol	Case Size														Tolerance	Remark	
		4 x 5	5 x 5	6.3x5	8 x 5	4 x 7	5 x 7	6.3x7	8 x 7	5 x 11	6.3x11	8 x 11.5	10x12.5	10x16	10x18			10x20
Lead wire diameter	d	0.45						0.5				0.6				±0.05		
Body height	A	6.0				8.0				12.5	13	14	17.5	19.5	21.5	MAX		
Intervals of bodies	P	12.7														±1.0		
Intervals of punched holes	P ₀	12.7														±0.2		
Distance between holes and lead wire	P ₁	3.85														±0.7	Fig 1. Fig 4.	
		5.35	5.1	5.1		5.35	5.1	5.1		5.1								Fig 2.
		5.6	5.35	5.1	5.1	5.6	5.35	5.1	4.6	5.35	5.1	4.6						Fig 3.
Distance between holes and bodies	P ₂	6.35														±1.0		
Distance between lead and lead	F	5.0														+0.8 -0.2	Fig 1. Fig 4.	
		2.0	2.5	2.5		2.0	2.5	2.5		2.5								Fig 2. F ₁ :5.0 ^{+0.5}
		1.5	2.0	2.5	2.5	1.5	2.0	2.5	3.5	2.0	2.5	3.5						Fig 3. F ₁ :5.0 ^{+0.5}
Base tape width	W	18.0														±0.5		
Adhesive tape width	W ₀	12.5														MIN		
Deviation between holes and base tape	W ₁	9.0														±0.5		
Deviation between adhesive and base tape	W ₂	1.5														MAX		
Distance between body bottom and tape center	H	17.5						18.5	20.0	18.5						±0.5	Fig 1. Fig 4.	
		17.5						18.5	18.5								Fig 2. Fig 3.	
Lead wire clinched height	H ₀	16.0														±0.5		
Distance between body top and tape center	H ₁	24.5				27.5				32.5		33.0	36.0	38.0	41.0	MAX		
Punched hole diameter	D ₀	4.0														±0.3		
Length of not good lead slit	L	11.0														MAX		
Base and adhesive tape thickness	t	0.6														±0.3		
Deviation of body alignment	Δh	0														±2.0		
Deviation of body alignment	Δh ₁	0														±1.0		

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DIMENSIONS (Ø12.5~ Ø18)

Item	Symbol	Case Size							Tolerance	Remark
		12.5 x 20	12.5 x 25	12.5 x 30	16 x 25	16 x 31.5	16 x 35.5	18 x 35.5		
Lead wire diameter	d	0.6			0.8				±0.05	
Body height	A	21.5	26.5	31.5	26.5	33	37.0	37.0	MAX	
Intervals of bodies	P	15.0			30.0				±1.0	Fig 5. Fig 6.
Intervals of punched holes	P ₀	15.0							±0.2	
Distance between holes and lead wire	P ₁	5.0			3.75				±0.7	
Distance between holes and bodies	P ₂	7.5							±1.0	
Distance between lead and lead	F	5.0			7.5				+0.8 -0.2	
Base tape width	W	18.0							±0.5	
Adhesive tape width	W ₀	15.0							MIN	
Deviation between holes and base tape	W ₁	9.0							±0.5	
Deviation between adhesive and base tape	W ₂	1.5							MAX	
Distance between body bottom and tape center	H	16.5			18.5				±0.5	Fig 5. Fig 6.
Distance between body top and tape center	H ₁	40.5	45.5	50.5	46.5	53.5	56.5	56.5	MAX	
Punched hole diameter	D ₀	4.0							±0.3	
Length of not good lead slit	L	11.0							MAX	
Base and adhesive tape thickness	t	0.6							±0.3	
Deviation of body alignment	Δh	0							±2.0	
Deviation of body alignment	Δh ₁	0							±1.0	



Fig 1. ($\phi 4 \sim \phi 8$)

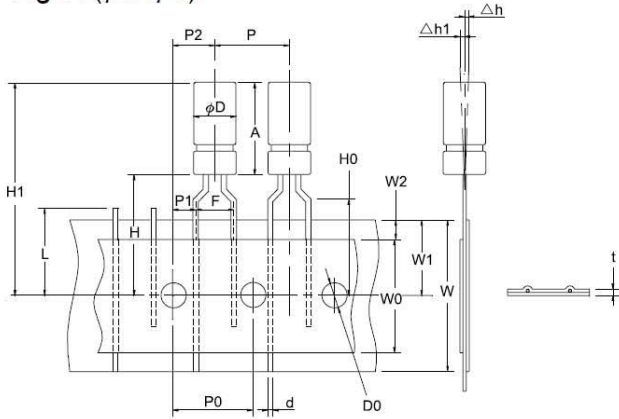


Fig 2. ($\phi 4 \sim \phi 5$)

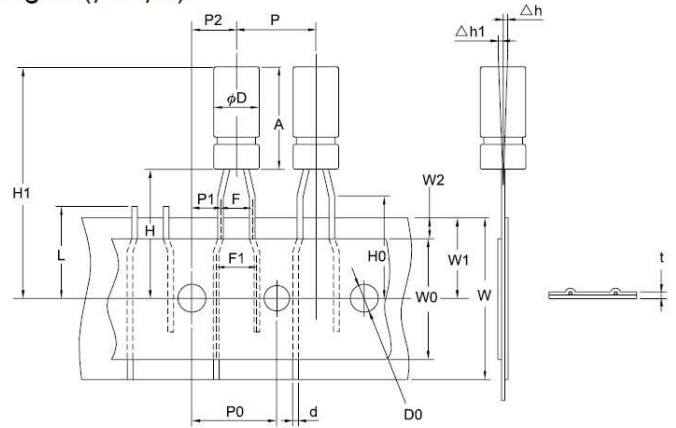


Fig 3. ($\phi 4 \sim \phi 8$)

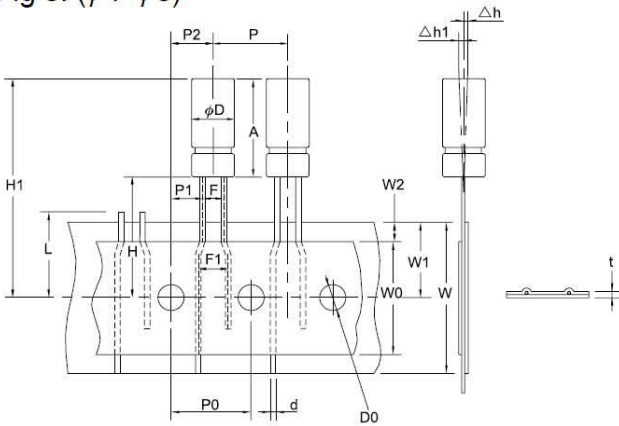


Fig 4. ($\phi 10$)

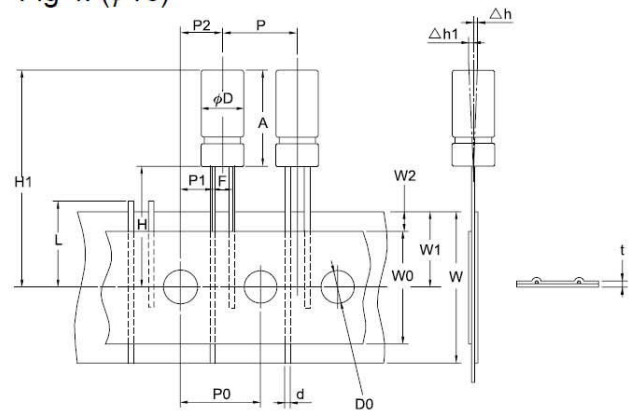


Fig 5. ($\phi 12.5$)

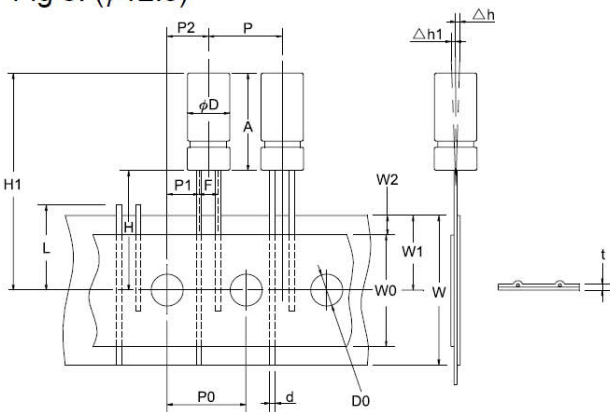
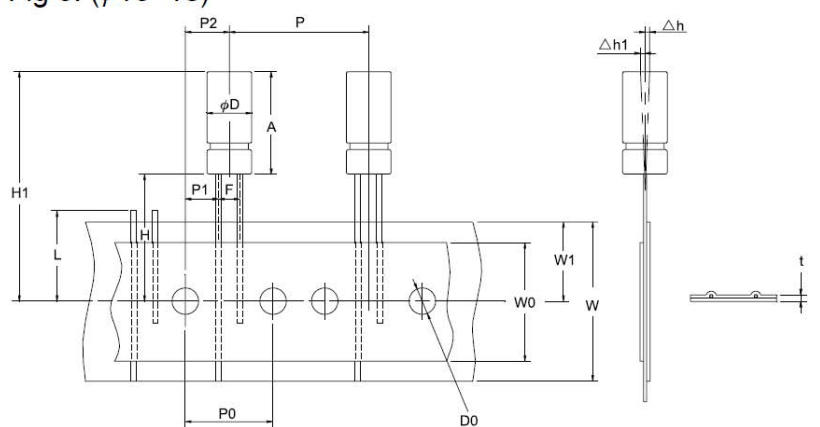


Fig 6. ($\phi 16 \sim 18$)





SOLDERABILITY

Capacitor lead wire is dipping into the oven, and then, dipping in $245\pm 3^{\circ}\text{C}$, solder liquid for 3 ± 0.5 seconds, the substance is above the liquid solder 2mm, the dipping lead must be adherent 95% fresh tin at least.

RESISTANCE TO SOLDERING HEAT

Put capacitor lead wire to dip $260\pm 5^{\circ}\text{C}$ in solder liquor away the body 2mm, after 10 ± 1 seconds taken out, after 2 hours in room temperature, should do final measurements, the values are following:

- (A) Capacitance change: $\leq \pm 10\%$ of initial value
- (B) Dissipation factor: \leq initial specified value
- (C) Leakage current: \leq initial specified value
- (D) Visual: No damage