Aluminum Electrolytic Capacitors

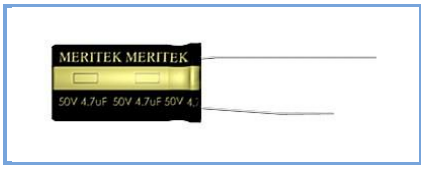
RoHS

RE Series
(Low Impedance, High R.C.)

MERITEK

FEATURES

- High ripple current, low E.S.R. and long life.
- Suitable for output of switching power supplies



SPECIFICATIONS

Item	Characteristic							
Operating Temp Range	- 55 ~ +105°C							
Rated Working Voltage	10 ~ 100VDC							
Capacitance Tolerance (120Hz 20°C)	± 20%(M), +50%/-10%(T)							
Leakage Current (20°C)	I ≤ 0.01CV ∗ **After 3 minutes**					**I : Leakage Current (μA)** **C : Rated Capacitance(μF)** **V : Working Voltage (V)**		
Surge Voltage (20°C)	**W.V.**	**10**	**16**	**25**	**35**	**50**	**63**	**100**
	S.V.	13	20	32	44	63	79	125
Dissipation Factor (tan δ) (120Hz 20°C)	add 0.02 per 1000uF for more than 1000uF							
	W.V.	**10**	**16**	**25**	**35**	**50**	**63**	**100**
	tan δ	0.12	0.10	0.09	0.08	0.07	0.06	0.06
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	**10~16**	**25~100**					
	-25°C / +20°C	3	2					
	-55°C / +20°C	6	4					
Load Life	**After hours application (ϕD ≤ 8mm 2000hrs, ϕD ≥ 10mm 3000hrs) 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 value.						
	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 following limits. (with voltage treatment)							
	Capacitance Change	≤ ±20% of initial						
	Dissipation Factor	≤ 200% of initial specified value						
	Leakage Current	≤ 200% of initial specified value						

PART NUMBER SYSTEM

RE 10V 331 M TA 8x15

Meritek Series

Rated Voltage

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

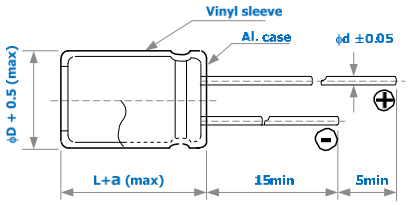
Tolerance
M - ±20%, T - +50/-10%

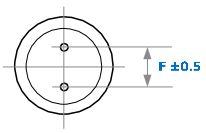
Package

Code	TA	TR	Blank
	Tape & Ammo	Tape & Reel	

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

DIMENSIONS (mm)





ϕD	8	10	12.5	16	18
F	3.5	5.0	5.0	7.5	7.5
d	0.6	0.6	0.6	0.8	0.8
a	1.5	1.5	1.5	1.5	1.5

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RIPPLE CURRENT COEFFICIENTS

Frequency(Hz)	60	120	400	1k	10k	100k
W.V.	Multiplier					
10~16V	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
50~100V	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 20°C 100kHz
Max. ripple current : A(rms) 105°C 100kHz

Cap. (uF)	V / Item	10			16			25		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.
100				→	8x11.5	0.348	0.27	8x11.5	0.330	0.34
220		8x11.5	0.190	0.36	8x15	0.180	0.44	10x16	0.170	0.59
330		8x15	0.152	0.50	10x16	0.144	0.57	10x18	0.136	0.76
470		10x16	0.124	0.62	10x18	0.118	0.71	10x20	0.112	0.95
680		10x18	0.098	0.78	10x20	0.093	0.90	12.5x20	0.088	1.21
1000		10x20	0.080	1.00	12.5x20	0.076	1.16	12.5x25	0.072	1.62
2200		12.5x25	0.046	1.61	12.5x30	0.043	1.89	12.5x40	0.041	2.70
3300		12.5x30	0.038	2.00	12.5x40	0.036	2.44	16x40	0.034	3.04
4700		12.5x40	0.032	2.50	16x40	0.031	2.64			

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

Cap. (uF)	V / Item	35			50		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.
47				→	8x11.5	0.453	0.29
68		8x11.5	0.374	0.30	8x15	0.352	0.39
100		8x15	0.311	0.40	10x16	0.292	0.49
220		10x18	0.161	0.66	10x20	0.151	0.80
330		10x25	0.129	0.93	12.5x20	0.121	1.04
470		12.5x20	0.105	1.07	12.5x25	0.099	1.37
680		12.5x25	0.083	1.42	12.5x30	0.078	1.79
1000		12.5x30	0.068	1.87	12.5x40	0.064	2.48
2200		16x40	0.039	2.83			

Cap. (uF)	V / Item	63			100		
		DxL	IMP.	R.C.	DxL	IMP.	R.C.
47		8x15	0.424	0.35	10x25	0.368	0.44
68		10x16	0.330	0.43	12.5x20	0.286	0.51
100		10x18	0.274	0.55	12.5x25	0.238	0.68
220		12.5x20	0.142	0.92	16x35.5	0.123	1.19
330		12.5x25	0.113	1.24	18x40	0.098	1.64
470		12.5x30	0.093	1.61			
680		16x35.5	0.073	2.09			

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	

RoHS

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. (ϕ4~ϕ8)

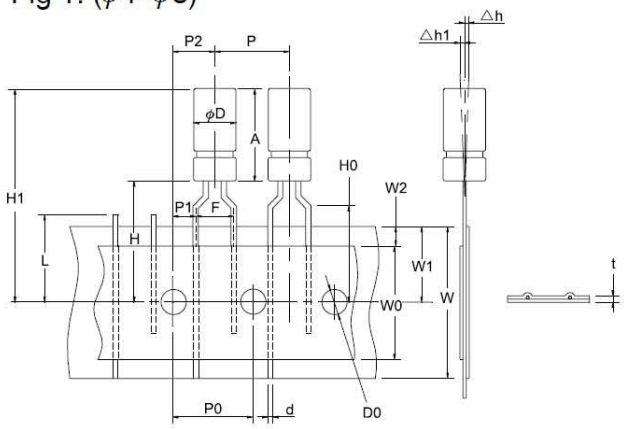


Fig 2. (ϕ4~ϕ5)

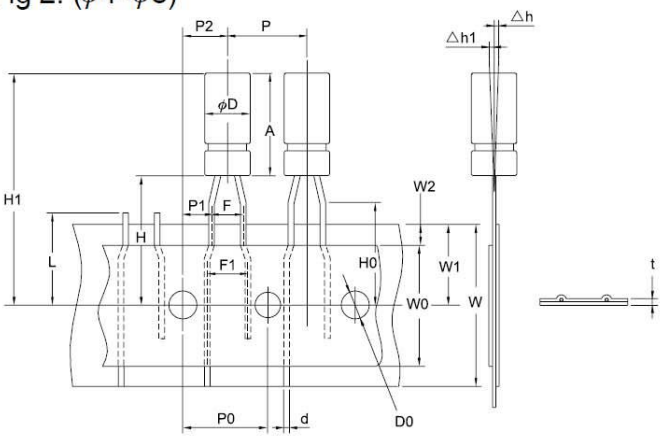


Fig 3. (ϕ4~ϕ8)

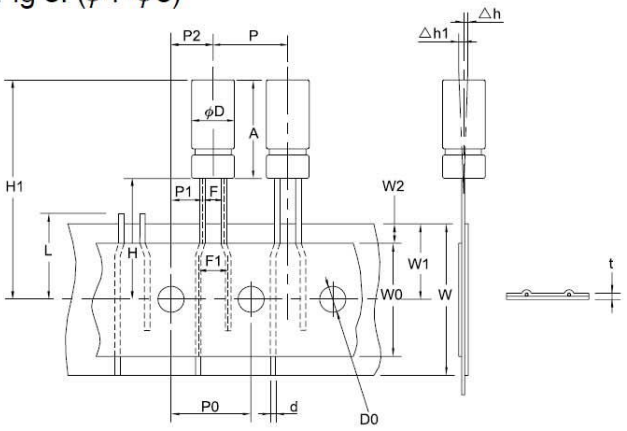


Fig 4. (ϕ10)

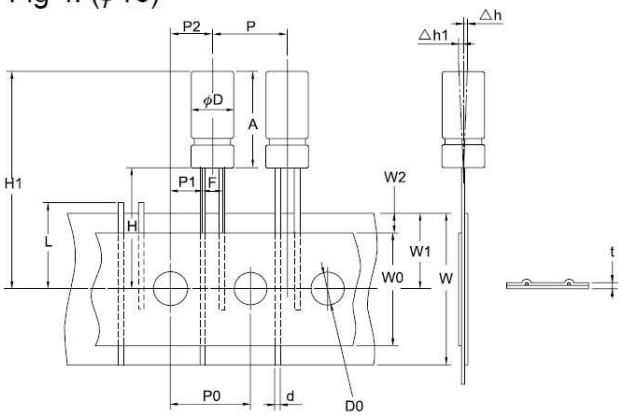


Fig 5. (ϕ12.5)

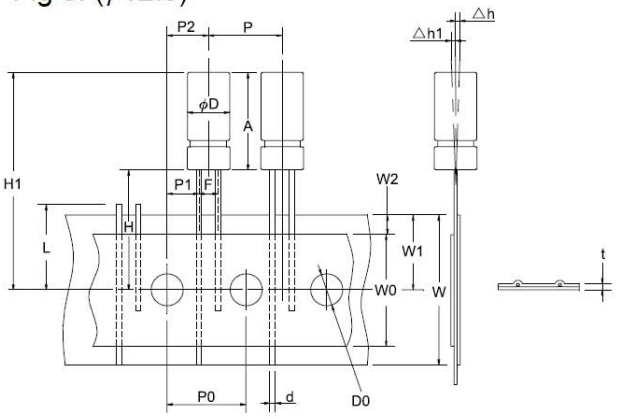
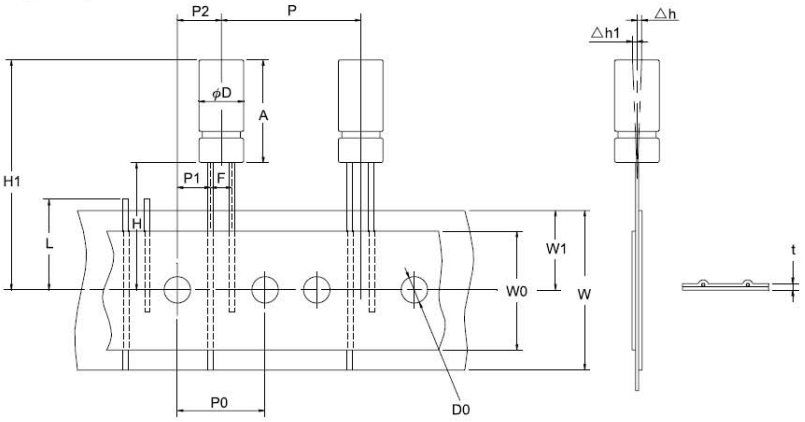


Fig 6. (ϕ16~18)



SOLDERABILITY

Capacitor lead wire is dipping into the oven, and then, dipping in 245±3℃, 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±5℃ 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: ≦ ±10% of initial value

(B) Dissipation factor: ≦ initial specified value

(C) Leakage current: ≦ initial specified value

(D) Visual: No damage