Aluminum Electrolytic Capacitors

MI Series (85°C,7mmL)

MERITEK

RoHS

FEATURES

- For general purposes series with 7mm height.

SPECIFICATIONS

Item	Characteristic								
Operating Temp Range	- 40 ~ +85°C								
Rated Working Voltage	4 ~ 63VDC								
Capacitance Tolerance (120Hz 20°C)	± 20%(M)								
Leakage Current (20°C)	I ≤ 0.01CV or 3 (μA) ∗**Whichever is greater after 2 minutes**						**I : Leakage Current (μA)** **C : Rated Capacitance(μF)** **V : Working Voltage (V)**		
Surge Voltage (20°C)	**W.V.**	**4**	**6.3**	**10**	**16**	**25**	**35**	**50**	**63**
	S.V.	5	8	13	20	32	44	63	79
Dissipation Factor (tan δ) (120Hz 20°C)	**W.V.**	**4**	**6.3**	**10**	**16**	**25**	**35**	**50~63**	
	tan δ	0.35	0.24	0.20	0.16	0.14	0.12	0.10	

Low Temperature Stability — Impedance ratio at 120Hz

Rated Voltage (V)	**4**	**6.3**	**10**	**16**	**25**	**35**	**50~63**
-25°C / +20°C	6	4	3	2	2	2	2
-40°C / +20°C	12	8	6	4	4	3	3

Load Life — **After 1000 hours application of W.V. and +85°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 +85°C no voltage application after 1000 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)

PART NUMBER SYSTEM

MI 50V 330 M TA 8x7

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

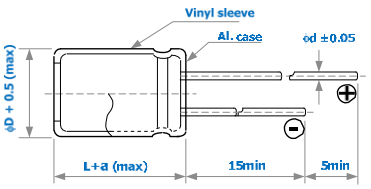
M - ±20%

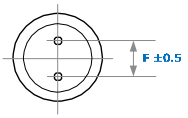
Package

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

RoHS

CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
Max. ripple current : mA(rms) 85°C 120Hz

Cap. (uF)	V / Item	4		6.3		10		16		25		35		50		63	
		DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1													→	4x7	4	4x7	4
0.22													→	4x7	6	4x7	6
0.33													→	4x7	7	4x7	7
0.47													→	4x7	8	4x7	8
1.0													→	4x7	12	4x7	12
2.2													→	4x7	18	4x7	18
3.3											→	4x7	20	4x7	22	5x7	25
4.7									→	4x7	22	4x7	24	4x7	26	6.3x7	34
10							→	4x7	30	4x7	32	5x7	39	6.3x7	49	6.3x7	49
22			→	4x7	36	4x7	40	4x7	44	5x7	55	6.3x7	65	8x7	85		
33		4x7	37	4x7	44	4x7	49	5x7	60	6.3x7	75	8x7	95	8x7	100		
47		4x7	44	5x7	60	5x7	65	5x7	75	8x7	100	8x7	110	8x7	110		
100		5x7	70	6.3x7	100	6.3x7	110	6.3x7	120	8x7	150						
220		6.3x7	120	8x7	170	8x7	190	8x7	210								
330		8x7	170	8x7	210												

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

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	

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)

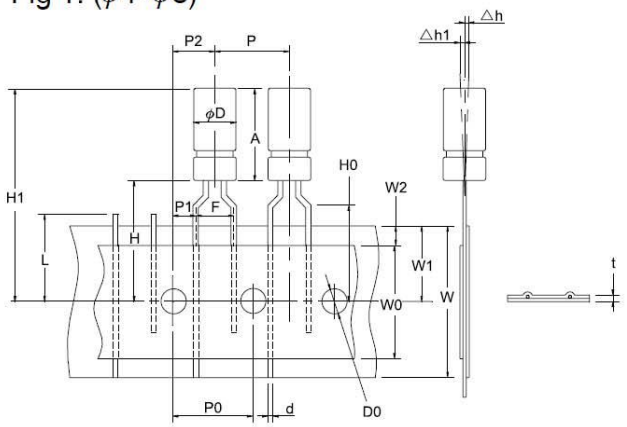


Fig 2. (ϕ4~ϕ5)

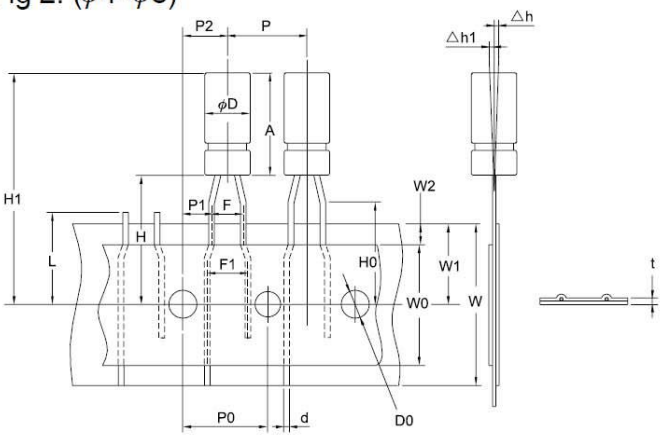


Fig 3. (ϕ4~ϕ8)

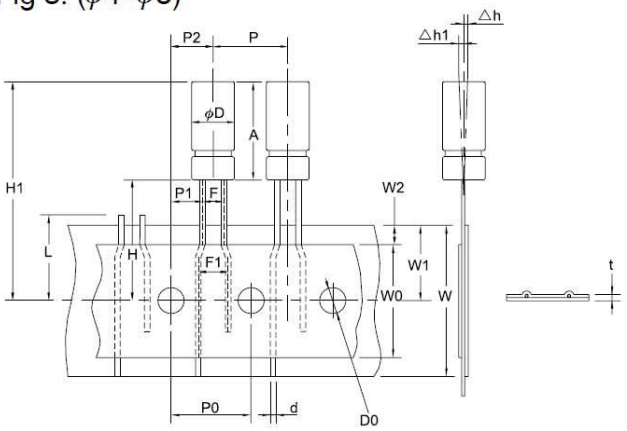


Fig 4. (ϕ10)

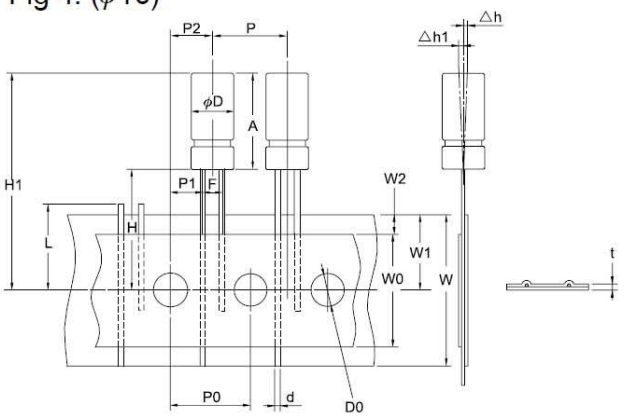


Fig 5. (ϕ12.5)

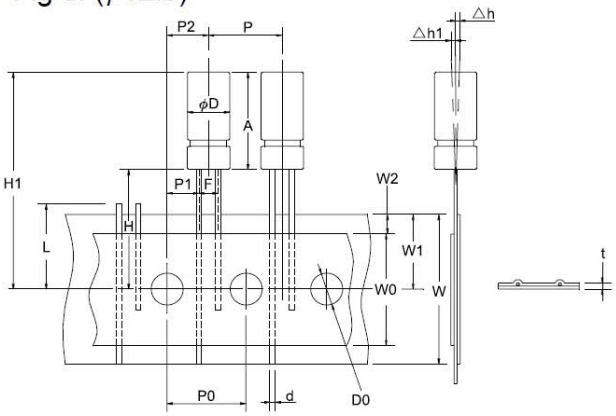
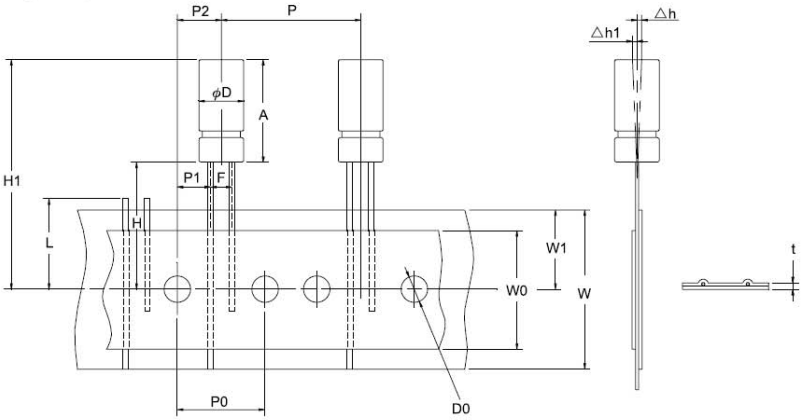


Fig 6. (ϕ16~18)



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