Aluminum Electrolytic Capacitors

RFZ Series
(High R.C., Low IMP & ESR)

MERITEK

RoHS

FEATURES

- Have a high ripple current, low IMP & E.S.R. and long life characteristics.
- Suitable for output of M/B and switching power supplies.

SPECIFICATIONS

Item	Characteristic
Operating Temp Range	- 40 ~ +105°C
Rated Working Voltage	6.3 ~ 25VDC
Capacitance Tolerance (120Hz 20°C)	± 20%(M)
Leakage Current (20°C)	I ≤ 0.03CV or 3 (uA) ∗**Whichever is greater after 2 minutes** **I : Leakage Current (μA)** **C : Rated Capacitance(μF)** **V : Working Voltage (V)**

Surge Voltage (20°C)

W.V.	6.3	10	16	25
S.V.	8	13	20	32

Dissipation Factor (tan δ) (120Hz 20°C)

Add 0.02 per 1000uF for more than 1000uF

W.V.	6.3	10	16	25
tan δ	0.22	0.19	0.16	0.16

Low Temperature Stability

Impedance ratio at 120Hz

Rated Voltage (V)	6.3	10	16	25
-25°C / +20°C	2	2	2	2
-40°C / +20°C	3	3	3	3

Load Life

After 2000 hours 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	≤ ±25% 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 limits for load life characteristics. (with voltage treatment)

PART NUMBER SYSTEM

RFZ 10V 152 M TA 8x20

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

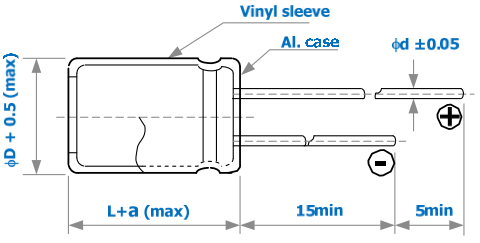
Tolerance
M - ±20%

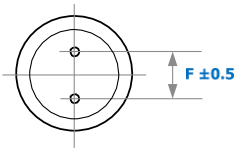
Package

Code	TA	TR	Blank
	Tape & Ammo	Tape & Reel	

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

DIMENSIONS (mm)





ϕD	8	10	12.5
F	3.5	5.0	5.0
d	0.6	0.6	0.6
a	1.5	1.5	1.5

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RIPPLE CURRENT COEFFICIENTS

Frequency(Hz)	120	1k	10k	≥100k
Multiplier	0.50	0.80	0.90	1.00

Temperature(°C)	≤65	85	105
Multiplier	2.1	1.7	1.0

CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
Max. E.S.R : Ω 20°C 100kHz
Max. ripple current : mA(rms) 105°C 100kHz

Cap. (uF)	V / Item	6.3			10		
		DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
680					8x14	0.036	1230
820		8x11.5	0.036	1230			
1000		8x16	0.028	1560	8x16	0.028	1660
					10x12.5	0.028	1700
1200		8x16	0.028	1710			
1500		8x20	0.018	2040	8x20	0.019	2150
		10x12.5	0.020	1760	10x16	0.019	2200
1800		10x16	0.018	2140	10x20	0.013	2660
2200		10x20	0.015	2530	10x23	0.012	3000
3300		10x23	0.012	3110			
3900		10x26	0.012	3480			
4700		12.5x26	0.014	3810			

Cap. (uF)	V / Item	16			25		
		DxL	E.S.R.	R.C.	DxL	E.S.R.	R.C.
470		8x11.5	0.036	1160	10x16	0.019	2030
680		8x16	0.028	1610			
		10x12.5	0.028	1640			
1000		8x20	0.019	2160			
		10x16	0.019	2210			
1500		10x20	0.013	2830			
1800		10x23	0.012	3300			

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)

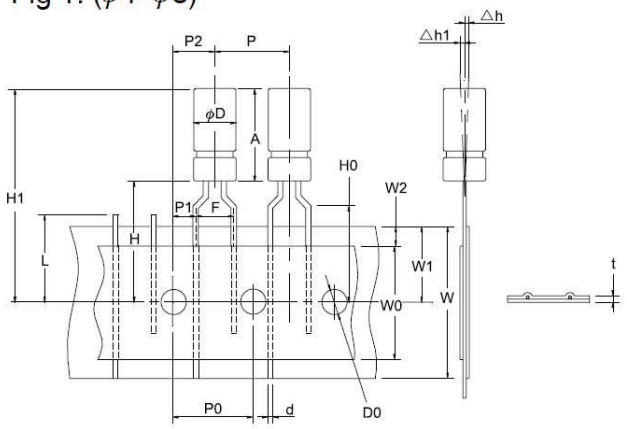


Fig 2. (ϕ4~ϕ5)

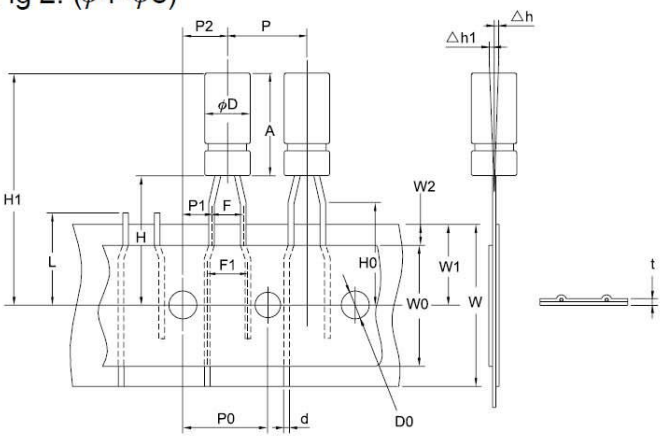


Fig 3. (ϕ4~ϕ8)

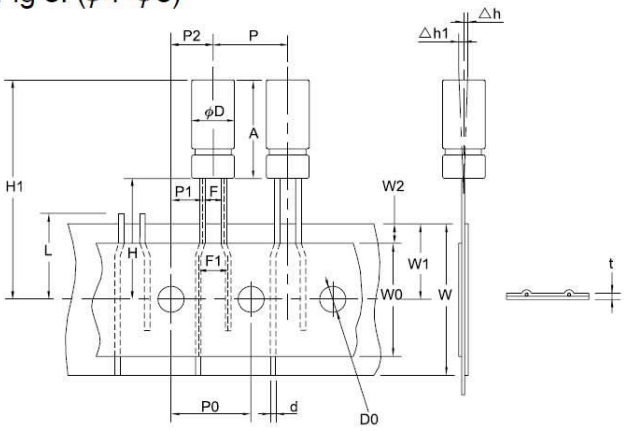


Fig 4. (ϕ10)

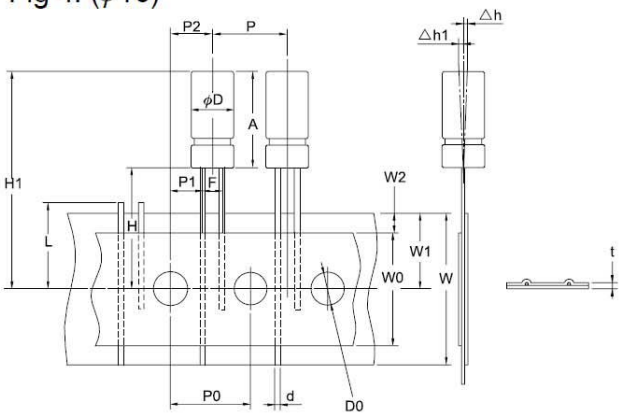


Fig 5. (ϕ12.5)

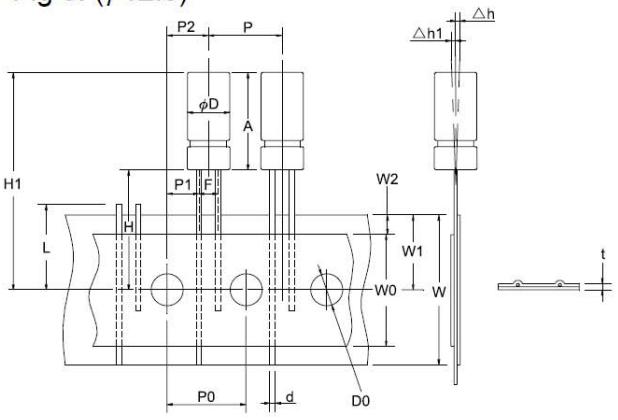
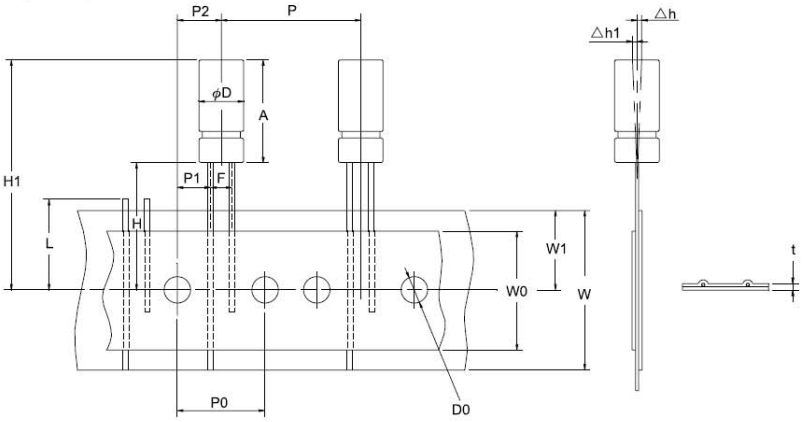


Fig 6. (ϕ16~18)



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