Aluminum Electrolytic Capacitors

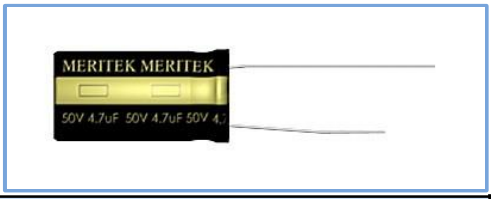
RoHS

REZ Series
(Long Life, Low Impedance)

MERITEK

FEATURES

- Low impedance, long life and high reliability with standing 5000 hours load life.
- Suitable for electronic ballast, adaptor and switching power



SPECIFICATIONS

Item	Characteristic
Operating Temp Range	- 55 ~ +105°C
Rated Working Voltage	6.3 ~ 63VDC
Capacitance Tolerance (120Hz 20°C)	± 20%(M)
Leakage Current (20°C)	I ≤ 0.01CV 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	35	50	63
S.V.	8	13	20	32	44	63	79

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

add 0.02 per 1000uF for more than 1000uF

W.V.	6.3	10	16	25	35	50	63
tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09

Low Temperature Stability

Impedance ratio at 120Hz

Rated Voltage (V)	6.3	10	16	25	35	50	63
-25°C / +20°C	2	2	2	2	2	2	2
-55°C / +20°C	3	3	3	3	3	3	3

Load Life

After hours (φ5~6.3mm 2000hrs, φ8mm 3000hrs, φD ≥10mm 5000hrs) 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 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 value.
Dissipation Factor	≤ 150% of initial specified value
Leakage Current	≤ 200% of initial specified value

PART NUMBER SYSTEM

REZ 10V 101 M TR 11x30

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

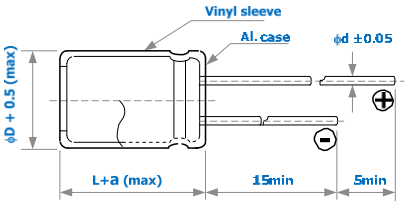
Tolerance
M - ±20%

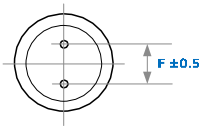
Package

Code	TA	TR	Blank
	Tape & Ammo	Tape & Reel	

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

DIMENSIONS (mm)





φD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
a	1.5	1.5	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					
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
50~63V	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 : A(rms) 105°C 100kHz

Cap. (uF)	V / Item	6.3 DxL	6.3 IMP 20°C	6.3 IMP -10°C	6.3 R.C.	10 DxL	10 IMP 20°C	10 IMP -10°C	10 R.C.	16 DxL	16 IMP 20°C	16 IMP -10°C	16 R.C.
47										5x11	0.568	1.421	0.17
68										5x11	0.500	1.250	0.21
100						5x11	0.500	1.250	0.24	6.3x11	0.367	0.918	0.29
220		6.3x11	0.308	0.769	0.39	6.3x11	0.249	0.623	0.41	8x11.5	0.190	0.474	0.52
330		6.3x11	0.246	0.615	0.48	8x11.5	0.169	0.423	0.61	10x12.5	0.114	0.285	0.75
470		8x11.5	0.178	0.446	0.70	8x11.5	0.139	0.346	0.73	10x12.5	0.093	0.233	0.90
680		10x12.5	0.081	0.203	1.00	10x12.5	0.077	0.194	1.03	10x16	0.074	0.184	1.20
1000		8x20	0.066	0.166	1.31	10x16	0.063	0.158	1.39	10x20	0.060	0.150	1.60
1200		10x16	0.058	0.144	1.47	10x20	0.055	0.137	1.68	10x25	0.052	0.130	1.94
1500		10x20	0.049	0.123	1.75	10x25	0.047	0.116	2.01	12.5x20	0.044	0.111	2.13
2200		10x25	0.038	0.094	2.27	12.5x20	0.036	0.090	2.41	12.5x25	0.034	0.086	2.75
3300		12.5x20	0.032	0.079	2.69	12.5x25	0.030	0.075	3.05	16x25	0.029	0.057	3.14
4700		12.5x30	0.027	0.067	3.56	16x25	0.025	0.051	3.35	16x31.5	0.024	0.048	3.24
6800		16x25	0.024	0.048	3.61	16x31.5	0.023	0.045	3.46	18x35.5	0.022	0.043	3.75
10000		16x31.5	0.022	0.043	3.64	18x35.5	0.021	0.041	3.92	18x40	0.019	0.039	4.20
15000		18x35.5	0.020	0.041	4.12	18x40	0.019	0.039	4.40				

Cap. (uF)	V / Item	25 DxL	25 IMP 20°C	25 IMP -10°C	25 R.C.	35 DxL	35 IMP 20°C	35 IMP -10°C	35 R.C.
4.7						5x11	1.912	4.781	0.08
10						5x11	1.498	3.745	0.11
22						5x11	0.817	2.043	0.16
33						5x11	0.636	1.589	0.20
47		5x11	0.539	1.348	0.22	6.3x11	0.510	1.275	0.27
68		6.3x11	0.419	1.049	0.30	6.3x11	0.397	0.991	0.33
100		6.3x11	0.349	0.871	0.36	8x11.5	0.330	0.824	0.49
220		8x11.5	0.180	0.450	0.65	10x12.5	0.128	0.319	0.85
330		10x12.5	0.108	0.270	0.94	10x16	0.102	0.255	1.15
470		10x16	0.088	0.221	1.25	10x20	0.084	0.209	1.52
680		10x20	0.070	0.175	1.65	12.5x20	0.066	0.165	2.07
1000		12.5x20	0.057	0.143	2.27	12.5x25	0.054	0.135	2.77
1200		12.5x20	0.050	0.124	2.49	12.5x30	0.047	0.117	3.29
1500		12.5x25	0.042	0.105	2.94	16x25	0.040	0.079	3.32
2200		16x25	0.032	0.065	3.42	16x31.5	0.031	0.077	3.49
3300		16x31.5	0.027	0.054	3.66	18x35.5	0.026	0.064	4.17
4700		18x35.5	0.023	0.046	4.23				

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CASE SIZE & MAX RIPPLE CURRENT

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

Cap. (uF)	V / Item	50 DxL	50 IMP 20°C	50 IMP -10°C	50 R.C.	63 DxL	63 IMP 20°C	63 IMP -10°C	63 R.C.
4.7		5x11	1.699	5.096	0.09	5x11	1.699	5.096	0.09
10		5x11	1.331	3.992	0.13	5x11	1.331	3.992	0.13
22		5x11	0.726	2.177	0.19	6.3x11	0.726	1.814	0.22
33		6.3x11	0.564	1.411	0.26	6.3x15	0.564	1.411	0.30
47		6.3x11	0.453	1.132	0.31	8x11.5	0.453	1.132	0.38
68		8x11.5	0.352	0.880	0.46	10x12.5	0.264	0.660	0.54
100		8x20	0.220	0.549	0.71	10x16	0.220	0.549	0.73
220		10x16	0.113	0.283	1.09	10x25	0.113	0.283	1.33
330		10x20	0.091	0.227	1.47	12.5x20	0.091	0.227	1.66
470		12.5x20	0.074	0.186	1.99	12.5x25	0.074	0.186	2.19
680		12.5x25	0.059	0.147	2.63	16x25	0.059	0.117	2.63
1000		16x25	0.048	0.096	3.19	16x35.5	0.048	0.096	3.17
1200		16x31.5	0.042	0.083	3.29	18x35.5	0.042	0.083	3.48
1500		16x35.5	0.035	0.071	3.44	18x40	0.035	0.071	3.87
2200		18x35.5	0.027	0.055	4.20				
3300		18x40	0.023	0.046	4.97				

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	

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Fig 1. (ϕ4~ϕ8)

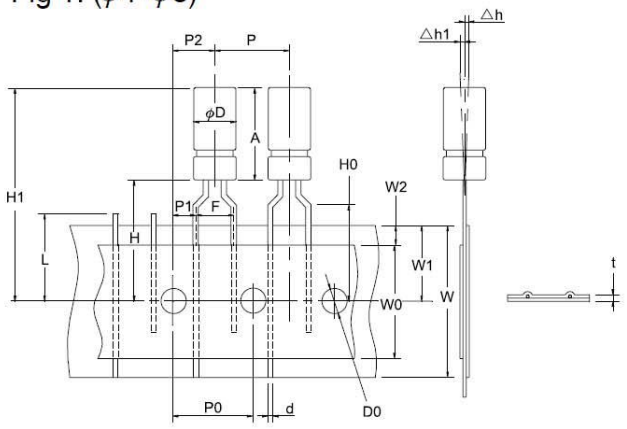


Fig 2. (ϕ4~ϕ5)

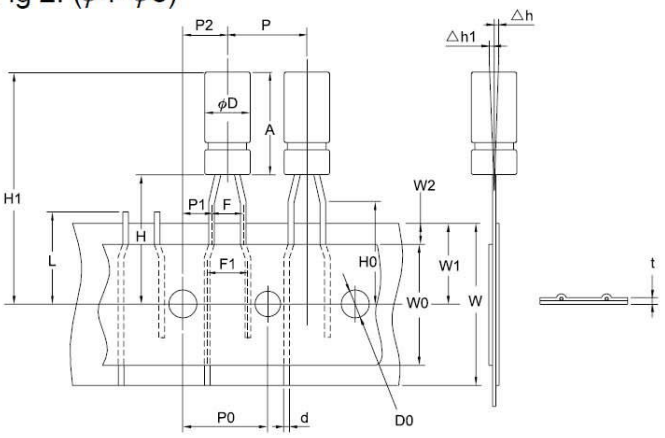


Fig 3. (ϕ4~ϕ8)

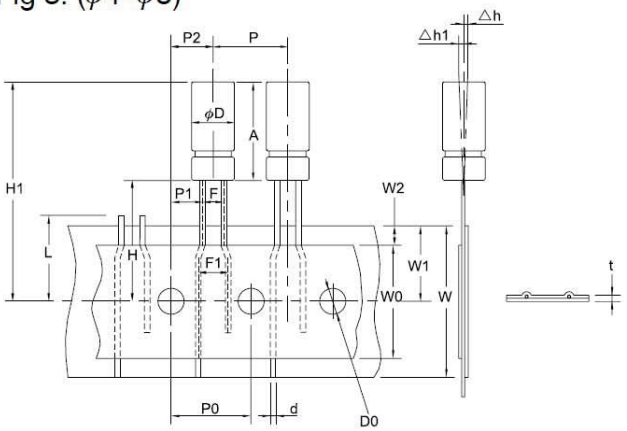


Fig 4. (ϕ10)

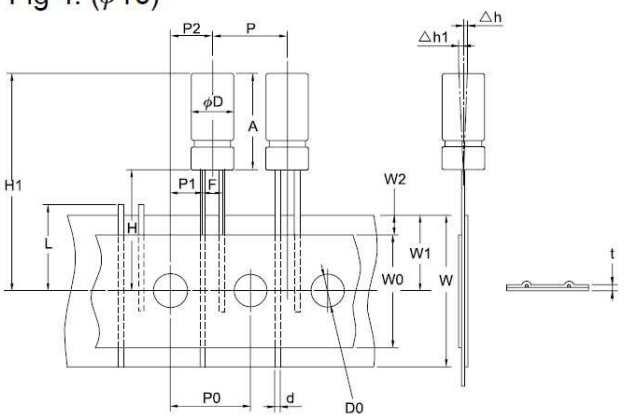


Fig 5. (ϕ12.5)

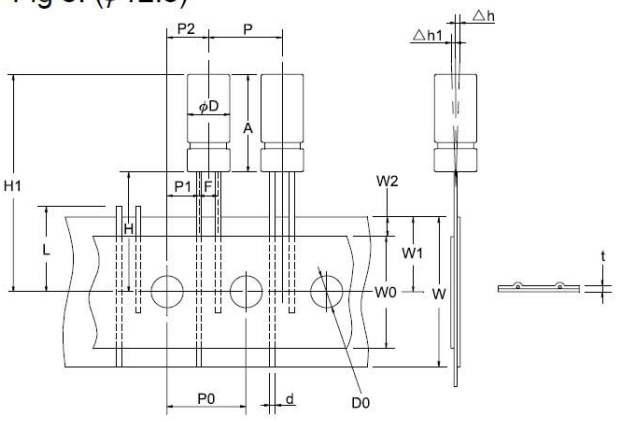
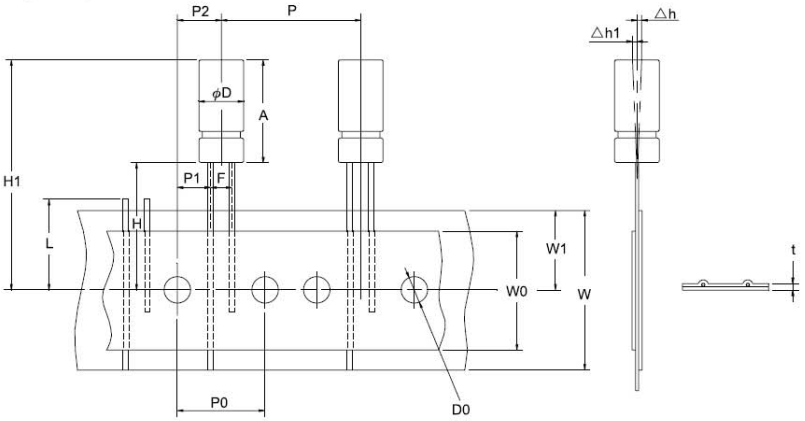


Fig 6. (ϕ16~ϕ18)



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