

Aluminum Electrolytic Capacitors



HT Series
(High Operating Temperature)

MERITEK

FEATURES

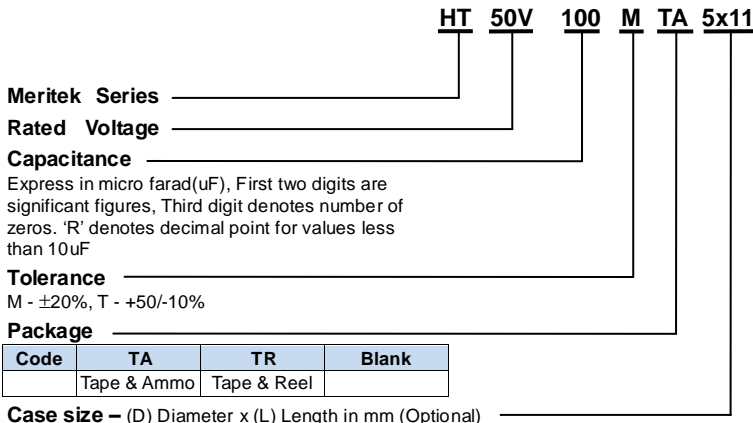
- High temperature 105°C and high reliability
- Good reliability series for communication equipment and industrial measurement instruments.



SPECIFICATIONS

Item	Characteristic															
Operating Temp Range	- 40 ~ +105°C								- 25 ~ +105°C							
Rated Working Voltage	6.3 ~ 100VDC								160 ~ 450VDC							
Capacitance Tolerance (120Hz 20°C)	± 20%(M), +50%/-10%(T)															
Leakage Current (20°C)	I ≤ 0.01CV or 4 (μA)								I ≤ 0.03CV + 40 (μA) max							
	* 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	63	100	160	200	250	350	400	450	
	S.V.	8	13	20	32	44	63	79	125	200	250	300	400	450	500	
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	100	160	200	250	350	400	450	
	tan δ	0.20	0.17	0.15	0.12	0.10	0.09	0.09	0.07	0.15	0.12	0.10	0.15	0.15	0.15	
Low Temperature Stability	Impedance ratio at 120Hz															
	Rated Voltage (V)	6.3			10~16			25~100			160~250			350 ~ 400		450
	-25°C / +20°C	4			3			2			4			8		15
	-40°C / +20°C	8			6			4			-			-		-
Load Life	After 2000 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	≤ ±25% of initial value for 6.3 ~ 16 W.V. , ≤ ±20% of initial value for 25 ~ 450 W.V.														
	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



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	65	85	105
Multiplier	1.80	1.50	1.00

Frequency(Hz)	60	120	1K	≥ 10k
W.V.	Multiplier			
6.3~25V	0.80	1.00	1.15	1.20
35~100V	0.75	1.00	1.30	1.40
160~450V	0.70	1.00	1.40	1.60

Aluminum Electrolytic Capacitors

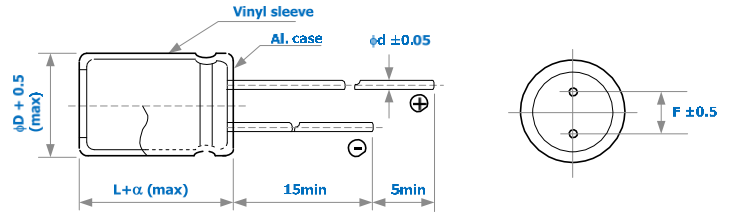


HT Series
(High Operating Temperature)

MERITEK

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
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5



CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
Max. ripple current : mA(rms) 105°C 120Hz

Cap. (uF)	V	6.3		10		16	
		DxL	R.C.	DxL	R.C.	DxL	R.C.
47	-	-	-	-	→	5x11	85
100	6.3x11	6.3x11	120	6.3x11	130	6.3x11	140
220	6.3x11	6.3x11	180	6.3x11	190	8x11.5	240
330	8x11.5	8x11.5	260	8x11.5	280	10x12.5	310
470	8x11.5	8x11.5	310	8x11.5	330	10x12.5	370
1000	10x12.5	10x12.5	470	10x16	570	10x20	660
2200	10x20	10x20	810	12.5x20	930	12.5x25	1090
3300	12.5x20	12.5x20	1020	12.5x25	1200	16x25	1270
4700	12.5x25	12.5x25	1260	16x25	1350	16x31.5	1560
6800	16x25	16x25	1430	16x31.5	1660	18x35.5	1940
10000	16x31.5	16x31.5	1730	18x35.5	2030	18x40	2200
15000	18x35.5	18x35.5	2120	18x40	2310		

Cap. (uF)	V	25		35		50	
		DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47					→	5x11	11
1.0					→	5x11	16
2.2					→	5x11	23
3.3					→	5x11	29
4.7					→	5x11	34
10	5x11	5x11	43	5x11	47	5x11	50
22	5x11	5x11	65	6.3x11	80	6.3x11	85
33	6.3x11	6.3x11	90	6.3x11	100	8x11.5	120
47	6.3x11	6.3x11	110	8x11.5	140	8x11.5	140
100	8x11.5	8x11.5	180	8x11.5	200	10x12.5	220
220	10x12.5	10x12.5	280	10x12.5	310	10x16	360
330	10x12.5	10x12.5	350	10x16	420	10x20	490
470	10x16	10x16	460	10x20	560	12.5x20	630
1000	12.5x20	12.5x20	790	12.5x25	960	16x25	1010
2200	16x25	16x25	1210	16x31.5	1440	18x35.5	1700
3300	16x31.5	16x31.5	1530	18x35.5	1840	18x40	2020
4700	18x35.5	18x35.5	1890	18x40	2100		
6800	18x40	18x40	2170				

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

Aluminum Electrolytic Capacitors



HT Series
(High Operating Temperature)

MERITEK

CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
Max. ripple current : mA(rms) 105°C 120Hz

Cap. (uF)	V Item	63		100	
		DxL	R.C.	DxL	R.C.
0.47			→	5x11	12
1			→	5x11	18
2.2			→	5x11	27
3.3			→	5x11	33
4.7			→	5x11	39
10		5x11	50	6.3x11	65
22		6.3x11	85	8x11.5	110
33		8x11.5	120	10x12.5	140
47		10x12.5	150	10x16	190
100		10x16	250	12.5x20	330
220		10x20	400	16x25	540
330		12.5x20	530	16x25	660
470		12.5x25	690	16x31.5	870
1000		16x31.5	1120		

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

Cap. (uF)	V Item	160		200		250	
		DxL	R.C.	DxL	R.C.	DxL	R.C.
0.47		6.3x11	13	6.3x11	14	6.3x11	15
1		6.3x11	19	6.3x11	20	8x11.5	26
2.2		6.3x11	28	6.3x11	30	8x11.5	38
3.3		8x11.5	40	8x11.5	43	10x12.5	49
4.7		8x11.5	48	10x12.5	55	10x12.5	60
10		10x12.5	75	10x16	90	10x20	110
22		10x20	140	10x20	140	12.5x20	170
33		12.5x20	180	12.5x20	190	12.5x25	220
47		12.5x25	230	12.5x25	250	16x25	270
100		16x25	340	16x31.5	400	16x35.5	460
220		18x35.5	630	18x40	710		

Cap. (uF)	V Item	350		400		450	
		DxL	R.C.	DxL	R.C.	DxL	R.C.
1		10x12.5	19	10x12.5	20	10x18	20
2.2		10x16	32	10x18	35	12.5x20	33
3.3		10x20	43	12.5x20	48	12.5x25	45
4.7		12.5x20	55	12.5x20	55	16x25	55
10		12.5x25	85	12.5x25	90	16x31.5	85
22		16x31.5	140	16x31.5	150	16x35.5	140
33		18x35.5	200	18x35.5	210	18x40	190
47		18x40	250	18x40	260		



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		

Aluminum Electrolytic Capacitors



HT Series
(High Operating Temperature)

MERITEK

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

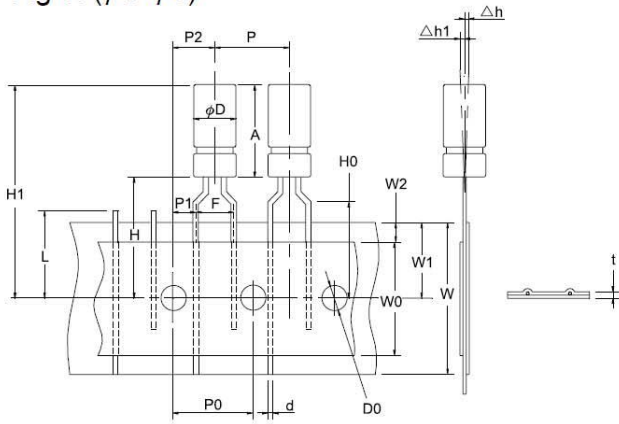


Fig 2. ($\phi 4 \sim \phi 5$)

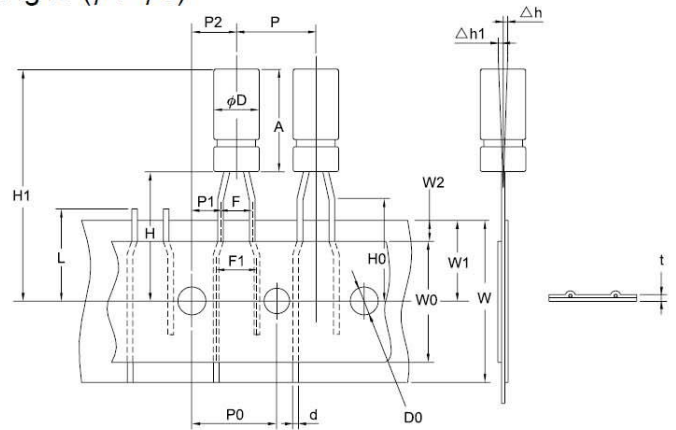


Fig 3. ($\phi 4 \sim \phi 8$)

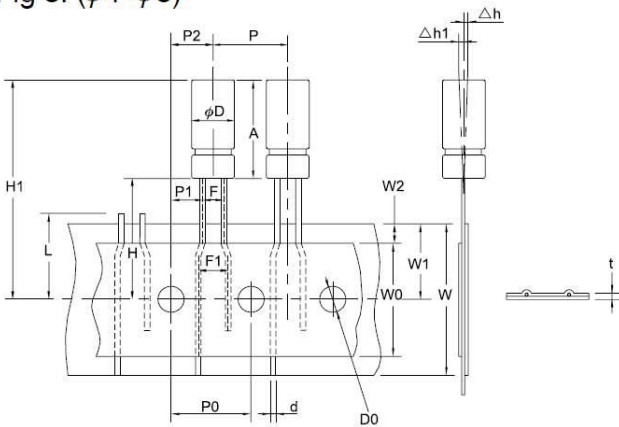


Fig 4. ($\phi 10$)

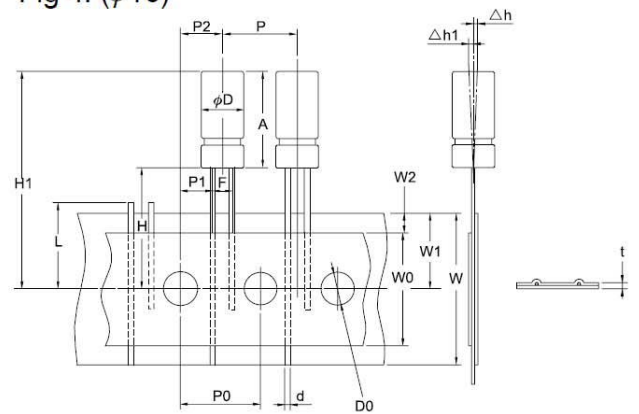


Fig 5. ($\phi 12.5$)

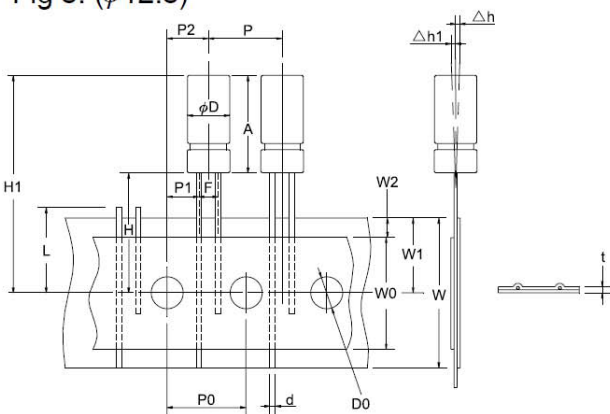
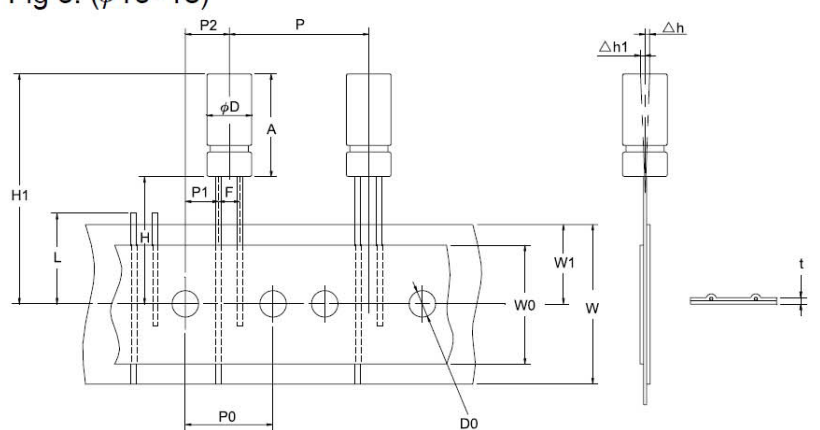


Fig 6. ($\phi 16 \sim 18$)





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