

Aluminum Electrolytic Capacitors

105°C 2000Hrs

HTK Series

MERITEK

FEATURE

- Operating Temperature up to 105°C
- Load Life of 2000 Hours
- Wide Temperature Series
- Applications: For High Quality, Reliability Application, High CV Product



SPECIFICATIONS

Item	Characteristic								
Operation Temperature	-55 ~ +105°C			-40 ~ +105°C			-25 ~ +105°C		
Rated Working Voltage	6.3 ~ 100VDC			160 ~ 400VDC			450VDC		
Capacitance Tolerance	±20% (M); at 120Hz 20°C			±20% (M); at 120Hz 20°C			±20% (M); at 120Hz 20°C		
Leakage Current at 20°C	I ≤ 0.01CV or 3 (μA) *Whichever is greater			I ≤ 0.03CV + 10 (μA) max			I ≤ 0.04CV + 100 (μA) max		
	After rated voltage applied for 2 min.; I:Leakage Current (μA); C:Capacitance (μF); V:Working Voltage (V)								
Surge Voltage at 20°C	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	Surge Voltage (V)	8	13	20	32	44	63	79	125
	Rated Voltage (V)	160	200	250	350	400	450	500	550
	Surge Voltage (V)	200	250	300	400	450	500	550	600
Dissipation Factor-tan δ At 120Hz 20°C	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	tan δ max	0.24	0.20	0.17	0.15	0.12	0.10	0.10	0.08
	Rated Voltage (V)	160	200	250	350	400	450	500	550
	tan δ max	0.15	0.15	0.15	0.20	0.20	0.20	0.25	0.25
Add 0.02 per 1000 μF for more than 1000 μF									
Low Temperature Stability	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	-25°C / +20°C	4	3	2	2	2	2	2	2
	-40°C / +20°C	8	6	4	4	3	3	3	3
	Rated Voltage (V)	160	200	250	350	400	450	500	550
	-25°C / +20°C	3	3	3	4	4	4	6	6
	-40°C / +20°C	4	4	4	10	10	--	--	--
Impedance ratio at 120Hz									
Load Life	Capacitance Change	≤ ±20% of initial value			After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)				
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At + 105°C no voltage application after 1000 hours. The capacitors shall meet the limits for load life characteristics. (With voltage treatment)								

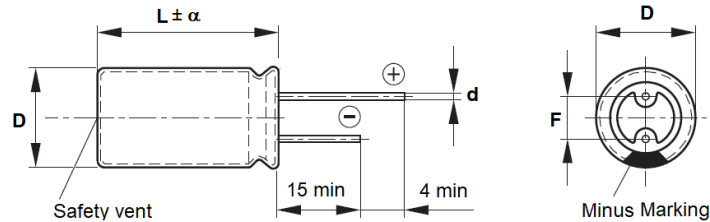
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DIMENSION



Unit: mm

D+0.5(max)	5	6.3	8	10	12.5	16	18	20	22	25
F±0.5	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5
d±0.05	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	1.0	1.0
α	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0

RIPPLE CURRENT COEFFICIENTS

Working Voltage	Frequency Coefficient			
	60Hz	120Hz	1KHz	≥ 10KHz
6.3~25V	0.85	1.00	1.10	1.20
35~100V	0.80	1.00	1.15	1.25
160~250V	0.75	1.00	1.25	1.40
350~450V	0.70	1.00	1.30	1.80
500~550V	0.60	1.00	1.10	1.15

Temperature Coefficient	
°C	Factor
65°C	1.75
85°C	1.40
105°C	1.00

PART NUMBERING SYSTEM

HTK (1) 1H (2) 101 (3) M (4) H (5) 115 (6) A (7) C (8)

No	Item	Code	Description	Series Reference
(1)	Meritek Series	HTK	Aluminum Electrolytic Capacitors	High temperature, 2000Hrs 105°C
(2)	Rated Voltage Code	1H	1H: 50V	DC working voltage, See Table Below
(3)	Capacitance	101	101:100μF	First two digit: significant, Third: Multiplier
(4)	Tolerance	M	M: ± 20%	-20% ~ +20%
(5)	Case Diameter Code	H	H: 8 mm	See Table Below
(6)	Case Height	115	115: 11.5 mm	Third digit denotes the first decimal place
(7)	Package	A	A: Tape & Ammo	R: Tape & Reel, Blank : Bulk
(8)	Taping Pitch Code	C	C: 2.5 mm	See Table Below, Blank: Bulk

Voltage Code	4	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	500
	0G	0J	1A	1C	1E	1V	1H	1J	2A	2C	2D	2E	2V	2G	2W	2H

Diameter Code	4	5	6.3	8	10	12.5	14.5	16	18	20	22	25
	D	E	F	H	J	K	U	L	M	N	P	Q

Pitch Code	1.5	2	2.5	3.5	5	7.5
	A	B	C	D	E	F

LEGACY PART NUMBERING SYSTEM

HTK (1) 50V (2) 101 (3) M (4) TA (5) 811 (6)

No	(1)	(2)	(3)	(4)	(5)	(6)
Item	Meritek Series	Rated Voltage	Capacitance	Tolerance	Package	Case Size

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		6.3VDC (0J)		10VDC (1A)		16VDC (1C)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
47	470	--	--	→	→	5x11	90
100	101	5x11	110	5x11	120	5x11	130
220	221	5x11	160	5x11	180	6.3x11	220
330	331	6.3x11	220	6.3x11	250	6.3x11	270
						8x11.5	310
470	471	6.3x11	270	6.3x11	290	8x11.5	370
1000	102	8x11.5	460	10x12.5	560	10x12.5	600
						10x16	670
2200	222	10x16	810	10x16	880	12.5x20	1180
				10x20	970		
3300	332	10x20	1050	12.5x20	1280	12.5x25	1510
4700	472	12.5x20	1350	12.5x25	1590	16x25	1830
6800	682	12.5x25	1680	16x25	1940	16x25	2040
						16x31.5	2120
10000	103	16x25	2020	16x31.5	2210	16x35.5	2430
						16x35.5	2590
15000	153	16x31.5	2200	16x35.5	2540	18x40	2960
		16x35.5	2320	18x35.5	2710	20x40	3040
22000	223	18x35.5	2660	18x40	3050	22x40	3390
		18x40	2810	20x40	3130	22x50	3740
33000	333	22x40	3230	22x50	3840	25x50	4200
		22x50	3560				
47000	473	22x50	3700	25x50	4260	--	--
68000	683	22x50	3820	--	--	--	--

Note:

1. Max ripple current: mA (rms) at 105°C. 120Hz
2. All blank voltage on sleeve marking is the same voltage as "→"point to.

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		25VDC (1E)		35VDC (1V)		50VDC (1H)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
0.1	0R1	--	--	→	→	5x11	5
0.22	R22	--	--	→	→	5x11	8
0.33	R33	--	--	→	→	5x11	10
0.47	R47	--	--	→	→	5x11	12
1	010	--	--	→	→	5x11	17
2.2	2R2	--	--	→	→	5x11	25
3.3	3R3	--	--	→	→	5x11	31
4.7	4R7	--	--	→	→	5x11	36
10	100	5x11	43	5x11	49	5x11	55
22	220	5x11	65	5x11	70	5x11	80
33	330	5x11	80	5x11	90	5x11	95
47	470	5x11	95	5x11	110	6.3x11	130
68	680	5x11	110	6.3x11	140	6.3x11	160
100	101	5x11	140	6.3x11	170	8x11.5	220
		6.3x11	160				
220	221	6.3x11	230	8x11.5	300	10x12.5	370
		8x11.5	270				
330	331	8x11.5	330	10x12.5	410	10x16	500
470	471	10x12.5	440	10x16	550	10x20	660
1000	102	10x16	710	12.5x20	1000	12.5x25	1210
		10x20	790				
2200	222	12.5x25	1370	16x25	1640	16x31.5	1850
						16x35.5	1950
3300	332	16x25	1730	16x31.5	1960	18x35.5	2360
4700	472	16x31.5	1990	16x35.5	2260	--	--
				18x35.5	2410	--	--
6800	682	16x35.5	2330	18x40	2780	22x50	3490
		18x35.5	2480				
10000	103	18x40	2820	22x50	3540	25x50	3930
		20x40	2890				
15000	153	22x50	3620	22x50	3750	--	--
22000	223	25x50	4080	--	--	--	--

Note:

1. Max ripple current: mA (rms) at 105°C, 120Hz
2. All blank voltage on sleeve marking is the same voltage as "→"point to.

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		63VDC (1J)		100VDC (2A)	
		DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)
0.1	0R1	--	--	5x11	6
0.22	R22	→	→	5x11	9
0.33	R33	→	→	5x11	11
0.47	R47	→	→	5x11	13
1	010	→	→	5x11	19
2.2	2R2	→	→	5x11	28
3.3	3R3	→	→	5x11	34
4.7	4R7	→	→	5x11	41
10	100	5x11	55	5x11	60
				6.3x11	65
22	220	5x11	80	6.3x11	100
33	330	6.3x11	110	8x11.5	140
47	470	6.3x11	130	8x14	190
				10x12.5	190
68	680	8x11.5	180	10x12.5	230
100	101	8x11.5	220	10x16	310
		10x12.5	250	10x20	340
220	221	10x16	410	12.5x20	570
				12.5x25	630
330	331	10x20	550	12.5x25	780
470	471	12.5x20	750	16x25	950
1000	102	16x25	1310	18x35.5	1630
				18x40	1720
2200	222	18x35.5	2080	22x50	2730
4700	472	22x50	3220	--	--
6800	682	25x50	3740	--	--

Note:

1. Max ripple current: mA (rms) at 105°C. 120Hz
2. All blank voltage on sleeve marking is the same voltage as "→"point to.

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		160VDC (2C)		200VDC (2D)		250VDC (2E)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
0.47	R47	6.3x11	12	6.3x11	13	6.3x11	14
1	010	6.3x11	18	6.3x11	19	6.3x11	21
2.2	2R2	6.3x11	26	6.3x11	28	6.3x11	31
3.3	3R3	6.3x11	32	6.3x11	34	6.3x11	37
						8x11.5	44
4.7	4R7	6.3x11	38	6.3x11	41	8x11.5	50
				8x11.5	48		
10	100	8x11.5	65	8x11.5	70	10x12.5	85
				10x12.5	80	10x16	95
22	220	10x12.5	110	10x16	130	10x20	150
		10x16	120	10x20	140	12.5x20	170
33	330	10x16	150	10x20	170	10x25	210
		10x20	160	12.5x20	200	12.5x20	210
47	470	10x20	190	12.5x20	240	12.5x20	260
		12.5x20	220			12.5x25	280
68	680	12.5x20	260	12.5x25	310	16x25	350
100	101	12.5x25	350	16x25	390	16x25	420
						16x31.5	440
220	221	16x31.5	560	16x35.5	640	18x35.5	740
		16x35.5	590	18x40	720		
330	331	18x35.5	770	18x40	880	20x40	980
		18x40	820				
470	471	18x40	970	22x40	1130	22x50	1360
		22x40	1050				
1000	102	25x50	1820	--	--	--	--

Note:

1. Max ripple current: mA (rms) at 105°C. 120Hz

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		350VDC (2V)		400VDC (2G)		450VDC (2W)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
0.47	R47	8x11.5	14	8x11.5	15	10x12.5	15
1	010	8x11.5	21	8x11.5	21	10x12.5	22
2.2	2R2	8x11.5	31	8x11.5	32	8x11.5	29
				10x12.5	35	10x20	39
3.3	3R3	8x11.5	37	8x11.5	39	10x16	44
		10x12.5	42	8x11.5	43	12.5x20	55
4.7	4R7	8x11.5	45	8x11.5	46	10x16	50
		10x12.5	50	10x16	55	12.5x20	65
10	100	10x16	80	10x16	85	10x20	85
		10x20	90	12.5x20	100	16x25	110
22	220	12.5x20	150	12.5x25	170	12.5x25	160
		12.5x25	170			16x31.5	170
33	330	12.5x20	180	16x25	220	16x31.5	200
		16x25	210	16x31.5	220	18x35.5	230
47	470	16x25	250	16x25	270	16x35.5	260
		16x35.5	270	18x35.5	300		
68	680	16x31.5	310	16x31.5	320	18x35.5	330
100	101	16x35.5	430	18x35.5	440	18x40	420
		18x40	450	20x40	480		
220	221	22x50	820	25x50	880	25x50	800
330	331	25x50	1080	--	--	--	--

Note:

1. Max ripple current: mA (rms) at 105°C. 120Hz

*Specifications subject to change without notice.