

Aluminum Electrolytic Capacitors

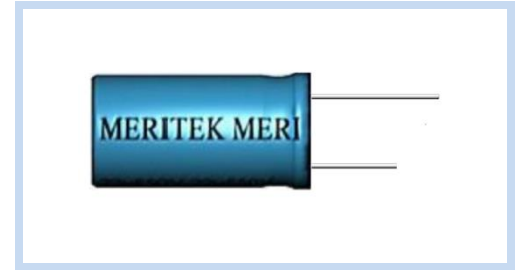
2000Hrs 85°C Non-Polar

NP Series

MERITEK

FEATURE

- Operating Temperature: -40°C ~ +85°C
- Load Life of 2000 Hours at +85°C
- Standard Non Polarity Series for Using in Polarity Reversal Circuits



SPECIFICATIONS

Item	Characteristic									
Operation Temperature	-40°C ~ + 85°C									
Rated Working Voltage	6.3 ~ 100VDC									
Capacitance Tolerance	±20% (M) at 120Hz 20°C									
Leakage Current at 20°C	I ≤ 0.04CV + 4 (μA) *Whichever is greater after 5 minutes					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	
Dissipation Factor-tan δ	Add 0.02 per 1000 μF for more than 1000 μF; 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	0.12	0.12	0.12	0.12
Low Temperature Stability	Impedance ratio at 120Hz									
	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	10	8	6	4	4	3	3	3	
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) (The polarity need to exchange every 250 hours)									
	Capacitance Change	≤ ±20% of initial value								
	Dissipation Factor	≤ 150% of initial specified value								
	Leakage current	≤ initial specified value								
Shelf Life	At +85°C no voltage application after 500 hours the capacitor shall meet the limits for load life characteristics. (with voltage treatment)									
	Capacitance Change	≤ ±20% of initial value								
	Dissipation Factor	≤ 200% of initial specified value								
	Leakage current	≤ 200% of initial specified value								

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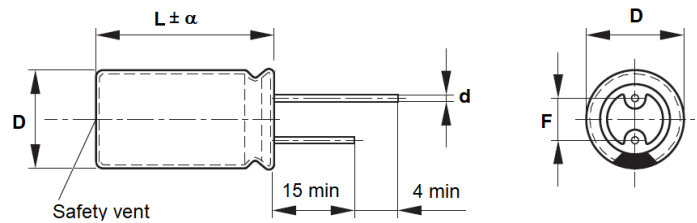
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DIMENSION

Unit: mm

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



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)
10	100				→	5x11	47
22	220			5x11	65	6.3x11	80
33	330	5x11	70	6.3x11	90	8x11	110
47	470	6.3x11	100	6.3x11	110	8x11	140
100	101	8x11	170	8x11	180	10x16	230
220	221	10x12.5	260	10x16	310	10x20	380
330	331	10x16	350	10x20	420	12.5x20	460
470	471	10x20	460	12.5x20	500	12.5x25	600
1000	102	12.5x25	740	16x32	950	16x32	1030
2200	222	16x32	1240	16x36	1350	16x32	1450
3300	332	16x25	1540	16x32	1500	18x36	1900
4700	472	16x32	1660	18x36	2000		
6800	682	18x36	2120				

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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)
1	1R0				→	5x11	18
2.2	2R2				→	5x11	26
3.3	3R3				→	6.3x11	37
4.7	4R7	5x11	34	5x11	38	6.3x11	44
10	100	6.3x11	55	6.3x11	65	8x11	75
22	220	8x11	100	8x11	110	10x12.5	120
33	330	8x11	120	10x12.5	140	10x16	160
47	470	10x12.5	150	10x16	190	10x20	210
100	101	10x20	270	12.5x20	300	12.5x25	330
220	221	12.5x20	400	12.5x25	490	16x32	580
330	331	16x25	570	16x25	640	16x36	750
470	471	16x32	760	16x32	840	16x32	840
1000	102	16x32	1100	16x36	1300		
2200	222	18x36	1730				

Capacitance		63VDC (1J)		100VDC (2A)	
		DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)
10	100	8x11	75	10x16	85
22	220	10x16	130	12.5x20	140
33	330	10x20	170	12.5x25	190
47	470	12.5x20	210	16x25	240
100	101	16x25	350	16x32	390
220	221	16x32	580	18x36	650
330	331	18x36	800	18x36	800
470	471	18x36	950	18x40	1000

Note:

1. Max ripple current :mA(rms) at 85°C. 120Hz
2. All blank voltage on sleeve marking is the same voltage as"→"point to.

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PART NUMBERING SYSTEM

NP 1H 220 M J 125 A E
(1) (2) (3) (4) (5) (6) (7) (8)

No	Item	Code	Description	Series Reference
(1)	Meritek Series	NP	Aluminum Electrolytic Capacitors	Non-Polar, 2000Hrs 85°C
(2)	Rated Voltage Code	1H	1H: 50V	DC working voltage, See Table Below
(3)	Capacitance	220	220:22µF	First two digit: significant, Third: Multiplier
(4)	Tolerance	M	M: ± 20%	-20% ~ +20%
(5)	Case Diameter Code	J	J: 10 mm	See Table Below
(6)	Case Height	125	125: 12.5 mm	Third digit denotes the first decimal place
(7)	Package	A	A: Tape & Ammo	R: Tape & Reel, Blank : Bulk
(8)	Taping Pitch Code	E	E: 5.0 mm	See Table Below, Blank: Bulk

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

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

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

LEGACY PART NUMBERING SYSTEM

NP 50V 220 M TA 1012
(1) (2) (3) (4) (5) (6)

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

*Specifications subject to change without notice.