

# Aluminum Electrolytic Capacitors Screw Terminal Type

AES-WP Series

MERITEK

## FEATURE

- 2000 hours of load life at 85°C
- Low ESR
- High ripple current capability
- High reliability design
- Operation temperature: -25°C ~ +85°C



## PART NUMBERING SYSTEM

AES (1)   2E (2)   272 (3)   M (4)   B (5)   075 (6)   WP (7)



No	Item	Code	Description	Reference
(1)	Meritek Series	AES	Aluminum Electrolytic Capacitor	Screw terminal type
(2)	Rated Voltage Code	2E	2E: 250V	2C:160V, 2D:200V ~ 2H:500V, 3W:550V
(3)	Capacitance	272	272: 2700μF	222: 2200μF
(4)	Tolerance	M	M: ±20%	-20% ~ +20% (M)
(5)	Case Code (Diameter)	B	B: 51mm	B: 51mm, C:64mm, D:77mm, E:90mm
(6)	Length	075	075: 75mm	075: 75mm ~ 236: 236mm
(7)	Internal Code	WP	2000 hours load life at 85°C	Product type reference

## ELECTRICAL CHARACTERISTICS

Item		Characteristic								
Operation Temperature		-25°C ~ +85°C								
Rated Working Voltage		160 ~ 550VDC								
Capacitance at 120Hz 20°C		390 ~ 39000μF								
Capacitance Tolerance at 120Hz 20°C		±20%(M)								
Max ripple Current at 120Hz 85°C		2.70 ~ 40.25Arms								
Leakage Current at 20°C		I ≤ 0.02CV or 5 mA whichever is smaller after 5 minutes					I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)			
Surge Voltage at 20°C	Working Voltage	W.V. (VDC)	160	200	250	350	400	450	500	550
	Surge Voltage	S.V. (VDC)	200	250	300	400	450	500	550	600
Dissipation Factor (tan δ) at 120Hz 20°C	W.V. (VDC)	350	160	200	250	350	400	450	500	500
	tan δ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.20
Low Temperature Stability Impedance ratio at 120Hz	8					160 ~ 550 (VDC)				
						-25°C / +20°C				
Load Life	Capacitance Change	≤ ±20% of initial value				After 5000 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)				
	Dissipation Factor	≤200% of initial specified value								
	Leakage Current	≤ initial specified value								
Shelf Life	At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)									

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## CASE SIZES AND MAX RIPPLE CURRENT

Rated Voltage		160Vdc (2C)		200Vdc (2D)		250Vdc (2E)	
Capacitance (μF)	Code	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)
2200	222	-	-	-	-	51x75	5.64
2700	272	-	-	-	-	51x75	6.25
3300	332	-	-	51x75	6.91	51x96	7.69
3900	392	51x75	7.51	51x75	7.51	51x115	9.07
4700	472	51x75	8.25	51x96	9.18	64x96	9.79
5600	562	51x96	10.02	51x115	10.86	64x96	10.68
6800	682	51x96	11.04	51x130	12.65	64x115	12.73
8200	822	51x115	13.15	64x96	12.93	64x115	13.98
10000	103	64x96	14.27	64x100	14.53	64x130	16.30
12000	123	64x96	15.64	77x96	16.82	77x115	18.15
15000	153	64x130	19.96	77x96	18.80	77x130	21.40
18000	183	64x130	21.87	77x130	23.44	77x155	25.33
22000	223	77x130	25.91	77x155	28.00	90x157	29.67
27000	273	77x130	28.71	90x131	30.39	-	-
33000	333	90x131	33.60	90x157	36.33	-	-
39000	393	90x157	39.50	-	-	-	-

Rated Voltage		350Vdc (2V)		400Vdc (2G)		450Vdc (2W)	
Capacitance (μF)	Code	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)
820	821	-	-	-	-	51x75	4.31
1000	102	-	-	51x75	4.76	51x80	4.89
1200	122	51x75	5.21	51x80	5.36	51x96	5.80
1500	152	51x80	5.99	51x96	6.48	51x115	7.03
1800	182	51x96	7.10	51x96	7.10	51x130	8.14
2200	222	51x96	7.85	51x130	9.00	64x100	8.86
2700	272	51x130	9.97	64x96	9.64	64x115	10.43
3300	332	51x130	11.02	64x115	11.53	64x130	12.17
		64x96	10.66				
3900	392	64x115	12.53	64x130	13.23	77x115	12.85
				77x96	11.90		
4700	472	64x130	14.53	77x115	14.10	77x130	14.87
		77x96	13.07				
5600	562	77x115	15.39	77x130	16.23	77x155	17.54
6800	682	77x130	17.89	77x155	19.32	90x157	20.62
8200	822	77x155	21.22	90x157	22.64	90x157	22.64
10000	103	90x157	25.00	90x157	25.00	90x196	27.58
12000	123	90x157	27.39	90x196	30.22	90x236	32.87
15000	153	90x196	33.78	90x236	36.74	-	-
18000	183	90x236	40.25	-	-	-	-

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## CASE SIZES AND MAX RIPPLE CURRENT (CONTINUED)

Rated Voltage		500Vdc (2H)		550Vdc (3W)	
Capacitance (μF)	Code	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)
390	391	-	-	51x75	2.70
470	471	51x75	2.96	-	-
560	561	-	-	51x96	3.60
				64x96	4.00
680	681	51x96	3.97	51x115	4.30
				64x115	4.76
820	821	51x115	4.72	51x130	4.99
				64x130	5.52
1000	102	51x130	5.52	-	-
		64x96	5.34		
1200	122	-	-	77x96	6.04
1500	152	64x115	7.08	77x115	7.28
		77x96	6.75		
1800	182	64x130	8.18	77x130	8.41
2200	222	77x115	8.82	77x155	10.05
2700	272	77x155	11.13	-	-
3300	332	-	-	90x157	13.15
3900	392	90x157	14.29	-	-

## DIMENSIONS

φD	W1	W2	W3	W4	W5	P
51	32.5	37.5	4.5	7.0	13.0	22.2
64	38.5	42.8	4.5	7.0	13.0	28.5
77	44.8	49.0	4.5	7.0	13.0	31.8
90	52.3	58.8	5.0	8.0	16.0	31.6

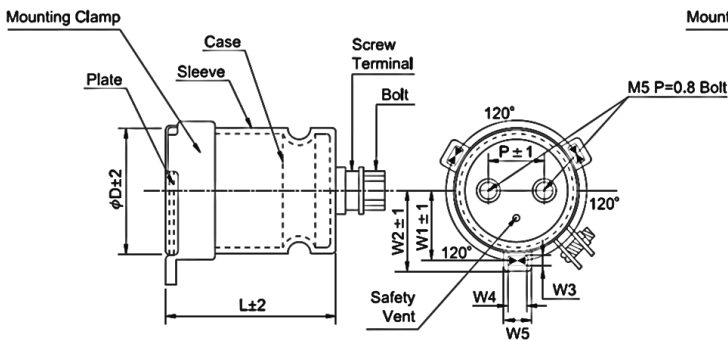
Unit: mm

## RIPPLE CURRENT COEFFICIENTS

Frequency (Hz)	60	120	300	1K	≥10K
Multiplier	0.70	1.00	1.10	1.30	1.40

Temperature	40°C	60°C	85°C
Multiplier	1.89	1.67	1.00

(▲ φ51, φ64, φ77)



(▲ φ90)

