

# Aluminum Electrolytic Capacitors Screw Terminal Type

AES-FP Series

MERITEK

## FEATURE

- 10000 hours of load life at 85°C
- High voltage capability
- High ripple current capability
- High reliability design
- Operation temperature: -40°C ~ +85°C



## PART NUMBERING SYSTEM

**AES** (1)   **2V** (2)   **102** (3)   **M** (4)   **B** (5)   **075** (6)   **FP** (7)



No	Item	Code	Description	Reference
(1)	Meritek Series	AES	Aluminum Electrolytic Capacitor	Screw terminal type
(2)	Rated Voltage Code	2V	2V: 350V	2V: 350V, 2G: 400V, 2W: 450V
(3)	Capacitance	102	102: 1000μF	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	FP	10000 hours load life at 85°C	Product type reference

## ELECTRICAL CHARACTERISTICS

Item	Characteristic			
Operation Temperature	-40°C ~ +85°C			
Rated Working Voltage	350 ~ 450VDC			
Capacitance at 120Hz 20°C	1000 ~ 15000μF			
Capacitance Tolerance at 120Hz 20°C	±20%(M)			
Max ripple Current at 120Hz 85°C	4.6 ~ 42.5Arms			
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)	350	400      450
	Surge Voltage	S.V. (VDC)	400	450      500
Dissipation Factor (tan δ) at 120Hz 20°C	W.V. (VDC)	350	400	450
	tan δ	0.15	0.15	0.15
Low Temperature Stability Impedance ratio at 120Hz	8		Rated Voltage 350 ~ 450 (VDC)	
			-25°C / +20°C	
Load Life	Capacitance Change	≤ ±20% of initial value		After 10000 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		350Vdc (2V)		400Vdc (2G)		450Vdc (2W)	
Capacitance (μF)	Code	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)	DxL (mm)	RC (Arms)
1000	102	51x75	5.7	51x75	4.6	51x96	5.9
1200	122	51x75	6.3	51x96	5.6	51x115	7.0
1500	152	51x96	7.8	51x115	6.7	51x130	8.3
1800	182	51x96	8.5	51x130	7.8	64x96	8.7
2200	222	51x130	10.8	64x96	8.3	64x115	10.5
2700	272	64x96	11.5	64x115	9.9	64x130	12.2
						77x115	12.5
3300	332	64x115	13.7	64x130	11.6	64x155	14.6
						77x130	14.5
3900	392	64x130	15.8	64x155	13.6	64x195	17.7
				77x115	12.8		
4700	472	64x155	18.7	64x195	16.6	77x155	18.1
		77x115	17.6	77x130	14.9		
5600	562	64x195	22.0	64x195	17.6	77x195	21.9
		77x130	20.3	77x155	17.0	90x157	21.0
6800	682	77x155	23.4	90x157	19.8	90x196	25.4
8200	822	90x157	27.2	90x157	21.7	90x196	28.0
10000	103	90x157	30.0	90x196	25.5	90x236	32.4
12000	123	90x196	36.3	90x236	30.4	-	-
15000	153	90x236	42.5	-	-	-	-

## DIMENSIONS

φD	W1	W2	W3	W4	W5	P
51	32.5	37.5	4.5	7.0	13.0	22.0
64	38.5	42.8	4.5	7.0	13.0	28.5
77	44.8	49.0	4.5	7.0	13.0	32.0
90	52.3	58.8	5.0	8.0	16.0	32.0

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

