

# Aluminum Electrolytic Capacitors Screw Terminal Type

AES-GP Series

MERITEK

## FEATURE

- 5000 hours of load life at 85°C
- Aluminum can with threaded stud mounting
- High ripple current capability
- High reliability design
- Operation temperature: -40°C ~ +85°C



## PART NUMBERING SYSTEM

AES   2W   102   M   B   075   GP  
(1)   (2)   (3)   (4)   (5)   (6)   (7)



No	Item	Code	Description	Reference
(1)	Meritek Series	AES	Aluminum Electrolytic Capacitor	Screw terminal type
(2)	Rated Voltage Code	2W	2W: 450V	2V: 350V, 2G: 400V, 2W: 450V
(3)	Capacitance	102	102: 1000 $\mu$ F	222: 2200 $\mu$ F
(4)	Tolerance	M	M: $\pm$ 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	GP	5000 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 ~ 18000 $\mu$ F				
Capacitance Tolerance at 120Hz 20°C	$\pm$ 20%(M)				
Max ripple Current at 120Hz 85°C	6.66 ~ 56.4Arms				
Leakage Current at 20°C	I $\leq$ 0.02CV or 5 mA whichever is smaller after 5 minutes		I : Leakage Current( $\mu$ A) C : Rated Capacitance( $\mu$ F) 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 $\delta$ ) at 120Hz 20°C	W.V. (VDC)	350	400	450	
	tan $\delta$	0.15	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	$\leq$ $\pm$ 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 $\leq$ rate working voltage)	
	Dissipation Factor	$\leq$ 200% of initial specified value			
	Leakage Current	$\leq$ 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	6.66	51x75	7.00
1200	122	51x75	7.29	51x75	7.29	51x96	8.53
1500	152	51x75	8.15	51x96	9.08	51x115	10.3
1800	182	51x96	9.94	51x96	9.94	51x130	12.0
2200	222	51x96	11.0	51x130	12.6	64x96	12.5
2700	272	51x130	14.0	64x96	13.5	64x115	15.0
						77x96	14.6
3300	332	51x130	15.4	64x115	16.1	64x130	17.5
						77x96	16.2
3900	392	64x115	17.5	64x130	18.5	64x155	20.6
						77x115	19.0
4700	472	64x130	20.3	64x155	22.0	64x195	25.1
				77x115	19.7	77x130	22.0
5600	562	64x155	24.0	64x195	26.7	77x155	25.9
		77x115	21.6	77x130	22.7		
6800	682	64x195	29.4	77x155	27.1	90x157	29.7
		77x130	25.0				
8200	822	77x155	29.7	90x157	31.7	90x157	32.6
10000	103	90x157	35.0	90x157	35.0	90x196	39.7
12000	123	90x157	38.3	90x196	42.3	90x236	47.3
15000	153	90x196	47.3	90x236	51.4	-	-
18000	183	90x236	56.4	-	-	-	-

## DIMENSIONS

φD	P	d1max	d2	T	T1
51	22.0	11.0	7.88	16	12
64	28.5	12.0	7.88	16	12
77	31.8	11.9	7.88	16	12
90	31.6	14.0	13.0	17	12

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

