

# Aluminum Electrolytic Capacitors Surface Mount AEC-Q200

SHU-A series

**MERITEK**

## FEATURE

- General Purpose Series
- Applications: Monitor/Computer, Home Appliance, OA/HA/Communication, Industrial, Automobile, Meter.
- AEC-Q200 Compliant
- Load Life at 105°C



Diameter (mm)	Load Life (Hours)
4.0 ~ 6.3	3000
8.0 ~ 10.0	5000



## SPECIFICATIONS

Item	Characteristic							
Operating Temperature	-55 ~ 105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Nominal Capacitance	1 ~ 1000µF, ±20% (at 20°C, 120HZ)							
Leakage Current	$I_L \leq 0.01CV$ or $3\mu A$ whichever is greater after 2 minutes at 20°C $I_L$ : Leakage Current (µA) C: Nominal Capacitance (µF) V: Rated Voltage (V)							
Ripple Current Coefficient, Frequency	Frequency (Hz)	<b>60</b>	<b>120</b>	<b>1K</b>	<b>10K</b>	--	--	
	Coefficient	0.85	1.00	1.15	1.25	--	--	
Dissipation Factor at 20°C, 120Hz	Working Voltage (V)	<b>6.3</b>	<b>10</b>	<b>16</b>	<b>25</b>	<b>35</b>	<b>50</b>	
	Dissipation Factor	0.28	0.24	0.20	0.16	0.13	0.12	
Low Temperature Stability, Impedance Ratio at 120Hz	Working Voltage (V)	<b>6.3</b>	<b>10</b>	<b>16</b>	<b>25</b>	<b>35</b>	<b>50</b>	
	Z-25°C / Z+20°C	4	3	2	2	2	2	
	Z-40°C / Z+20°C	10	7	5	3	3	3	
Load Life	Capacitance	$\leq \pm 30\%$ of initial value					Apply Working Voltage for Rated Load Life / Temperature Stabilized at +20°C.	
	Dissipation Factor	$\leq 200\%$ of initial value						
	Leakage Current	$\leq$ Initial specified value						
Shelf Life	Capacitance	$\leq \pm 30\%$ of initial value					After storage condition without voltage applied for 1000 hours at Rated Temperature, Stabilizing for 1 to 2 hours.	
	Dissipation Factor	$\leq 200\%$ of initial value						
	Leakage Current	$\leq$ Initial specified value						
Resistance to Soldering Heat	Capacitance	$\leq \pm 20\%$ of initial value					For other procedures than those specified, Soldering iron method: Temperature: $260 \pm 5^\circ C$ . Application time of soldering iron: 10 sec	
	Dissipation Factor	$\leq$ specified value						
	Leakage Current	$\leq$ specified value						

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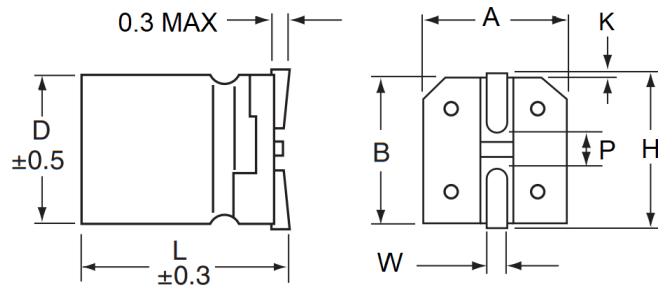
## STANDARD RATING

Rated Voltage	Rated Capacitance		Case Size	Tan $\delta$	Ripple Current
	(V <sub>DC</sub> )	( $\mu$ F) Code			
6.3	22	220	4x5.4	0.28	23
	33	330	5x5.4	0.28	31
	47	470	5x5.4	0.28	38
	100	101	6.3x5.4	0.28	65
	220	221	6.3x7.7	0.28	120
	330	331	8x10.2	0.28	190
	470	471	10x10.2	0.28	260
	1000	102	10x10.2	0.28	380
10	22	220	5x5.4	0.24	28
	33	330	5x5.4	0.24	34
	47	470	6.3x5.4	0.24	47
	100	101	6.3x7.7	0.24	85
	220	221	8x10.2	0.24	170
	330	331	10x10.2	0.24	230
	470	471	10x10.2	0.24	280
	16	10	100	4x5.4	0.20
22		220	5x5.4	0.20	30
33		330	6.3x5.4	0.20	43
47		470	6.3x5.4	0.20	50
100		102	6.3x7.7	0.20	95
220		221	10x10.2	0.20	210
330		331	10x10.2	0.20	260
470		471	10x10.2	0.20	330

Rated Voltage	Rated Capacitance		Case Size	Tan $\delta$	Ripple Current
	(V <sub>DC</sub> )	( $\mu$ F) Code			
25	10	100	5x5.4	0.16	23
	22	220	6.3x5.4	0.16	39
	33	330	6.3x5.4	0.16	48
	47	470	6.3x7.7	0.16	75
	100	101	8x10.2	0.16	140
	220	221	10x10.2	0.16	230
	330	331	10x10.2	0.16	290
	35	4.7	4R7	4x5.4	0.13
10		100	5x5.4	0.13	25
22		220	6.3x5.4	0.13	43
33		330	6.3x7.7	0.13	70
47		470	8x10.2	0.13	100
100		101	10x10.2	0.13	170
220		221	10x10.2	0.13	260
50		1.0	1R0	4x5.4	0.12
	2.2	2R2	4x5.4	0.12	11
	3.3	3R3	4x5.4	0.12	13
	4.7	4R7	5x5.4	0.12	18
	10	100	6.3x5.4	0.12	30
	22	220	6.3x7.7	0.12	60
	33	330	8x10.2	0.12	90
	47	470	8x10.2	0.12	120
	100	101	10x10.2	0.12	180

Note: Ripple Current measured at 120KHz, 105°C

## DIMENSION



Unit: mm

D	L	A ±0.2	B ±0.2	H Max	W	P ±0.2	K
4.0 (D)	5.4	4.3	5.0	5.5	0.65±0.1	1.0	0.35+0.15/-0.2
5.0 (E)	5.4	5.3	6.0	6.5	0.65±0.1	1.5	0.35+0.15/-0.2
6.3 (F)	5.4	6.6	7.3	7.8	0.65±0.1	2.1	0.35+0.15/-0.2
6.3 (F)	7.7	6.6	7.3	7.8	0.65±0.1	2.1	0.35+0.15/-0.2
8.0 (H)	6.2	8.3	9.0	9.5	0.65±0.1	2.2	0.35+0.15/-0.2
8.0 (H)	10.2	8.3	9.1	10.0	0.90±0.2	3.1	0.70±0.20
10.0 (J)	10.2	10.3	11.1	12.0	0.90±0.2	4.6	0.70±0.20

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## PART NUMBERING SYSTEM

**SHU**   **1H**   **101**   **A**   **J102**  
 (1)   (2)   (3)   (4)   (5)

No	Item	Code	Description	
(1)	Product Code	SHU	Aluminum Electrolytic Capacitors, SMD Type, 3000, 5000 Hrs 105°C	
(2)	Rated Voltage	1H	50VDC	DC Voltage Code
(3)	Capacitance	101	100µF ±20% (M)	First two digits: significant, Third: Multiplier
(4)	Series Code	A	AEC-Q200 Compliant Series	
(5)	Size Code	J102	10x10.2mm	DxL (mm)

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

\*Specifications subject to change without notice.