

# Snap-In Aluminum Electrolytic Capacitors



**MUH** Series

**MERITEK**

## FEATURES

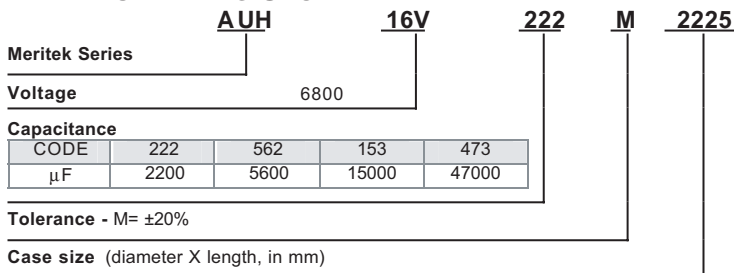
- 105°C standard
- High CV density
- Load life of 2,000 hours at 105°C



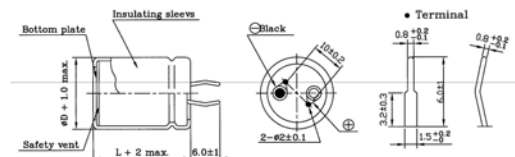
## SPECIFICATIONS

Item	Characteristic																																				
Operating Temp Range	10V to 250V: -40°C to +105°C 315V to 450V: -25°C to +105°C																																				
Rated Working Voltage	10 to 450VDC																																				
Capacitance Tolerance	±20% (M)																																				
Leakage Current (20°C)	$I = 0.02CV$ or 2mA, whichever is less (at 20°C after 5 minutes) $I$ = Leakage current (µA) $C$ = Nominal capacitance (µF) $V$ = Rated voltage (VDC)																																				
Dissipation Factor T <sub>and</sub> (120Hz, 20°C)	<table border="1"> <thead> <tr> <th>WV</th> <th>10 to 25</th> <th>35 to 50</th> <th>63 to 100</th> <th>160 to 250</th> <th>315 to 450</th> </tr> </thead> <tbody> <tr> <td>47-2200 µF</td> <td>-</td> <td>0.2</td> <td>0.15</td> <td>0.1</td> <td>0.2</td> </tr> <tr> <td>2700- µF</td> <td>0.30</td> <td>0.25</td> <td>0.2</td> <td>-</td> <td>-</td> </tr> <tr> <td>8200µF</td> <td>0.35</td> <td>0.3</td> <td>0.25</td> <td>-</td> <td>-</td> </tr> <tr> <td>10000-33000µF</td> <td>0.6</td> <td>0.4</td> <td>0.3</td> <td>-</td> <td>-</td> </tr> <tr> <td>39000-47000µF</td> <td>0.8</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	WV	10 to 25	35 to 50	63 to 100	160 to 250	315 to 450	47-2200 µF	-	0.2	0.15	0.1	0.2	2700- µF	0.30	0.25	0.2	-	-	8200µF	0.35	0.3	0.25	-	-	10000-33000µF	0.6	0.4	0.3	-	-	39000-47000µF	0.8	-	-	-	-
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Low Temperature Characteristics	Impedance ratio at 120 Hz <table border="1"> <thead> <tr> <th>WV</th> <th>10 to 16</th> <th>25 to 100</th> <th>160 to 250</th> <th>315 to 450</th> </tr> </thead> <tbody> <tr> <td>Z -25°C/Z 20°C</td> <td>4</td> <td>3</td> <td>3</td> <td>8</td> </tr> <tr> <td>Z -40°C/Z 20°C</td> <td>12</td> <td>6</td> <td>6</td> <td>-</td> </tr> </tbody> </table>	WV	10 to 16	25 to 100	160 to 250	315 to 450	Z -25°C/Z 20°C	4	3	3	8	Z -40°C/Z 20°C	12	6	6	-																					
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Z -25°C/Z 20°C	4	3	3	8																																	
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Load Life	After applying rated working voltage for 2000 hours at 105°C and then being stabilized at +20°C, capacitors shall meet following limits. <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </tbody> </table>	Capacitance change	Within ±20% of the initial value	Dissipation Factor	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value																														
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Shelf Life	After storage for 1000 hours at 105°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits. <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>≤ 150% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </tbody> </table>	Capacitance change	Within ±20% of the initial value	Dissipation Factor	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value																														
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## PART NUMBERING SYSTEM



## DIMENSIONS



## RIPPLE CURRENT COEFFICIENT

### Frequency

WV (V)	Freq (Hz)					
	50	120	500	1K	10K	100K
16 to 100	0.9	1.0	1.10	1.15	1.25	1.25
160 to 250	0.8	1.0	1.25	1.40	1.45	1.50
315 to 450	0.84	1.0	1.20	1.20	1.20	1.32

### Temperature

Temperature	45°C	60°C	70°C	85°C
Factor	2.40	2.20	1.65	1.0

Specifications are subject to change without notice.

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Case Size & Max Ripple Current									Ripple current (mA/105°C, 120Hz)								
WV		10				16				25				35			
Cap (µF)	Dia.	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
		3300														22x25 1.40	
3900														22x30 1.57	25x25 1.57		
4700										22x25 1.50				22x35 1.80	25x25 1.76		
5600										22x30 1.70	25x25 1.70			22x40 2.05	25x30 2.00	30x25 2.00	
6800					22x25 1.57					22x35 2.05	25x25 2.05			22x45 2.24	25x35 2.20	30x25 2.20	
8200					22x30 1.85	25x25 1.85				22x40 2.20	25x30 2.15	30x25 2.20		22x50 2.80	25x40 2.75	30x30 2.75	
10000	22x25 1.55				22x35 1.95	25x25 1.95				22x45 2.55	25x35 2.60	30x30 2.60			25x45 2.91	30x35 2.87	35x30 2.87
12000	22x30 1.77	25x25 1.77			22x35 2.30	25x30 2.30	30x25 2.30			22x50 2.70	25x40 2.70	30x30 2.70			25x50 3.20	30x40 3.20	35x30 3.20
15000	22x35 1.96	25x25 1.90			22x40 2.65	25x35 2.65	30x30 2.65				25x45 2.95	30x35 2.95	35x30 2.95			30x45 3.65	35x35 3.65
18000	22x35 2.21	25x30 2.21	30x25 2.21		22x45 2.75	25x40 2.75	30x30 2.75				25x50 3.20	30x40 3.20	35x35 3.20			30x50 4.30	35x40 4.30
22000	22x45 2.35	25x35 2.40	30x25 2.35			25x45 2.82	30x35 2.82	35x30 2.82				30x45 3.64	35x35 3.64				35x50 4.95
27000		25x40 2.75	30x30 2.75			25x50 3.10	30x40 3.10	35x30 3.10					35x45 4.20				
33000		25x50 2.90	30x35 2.90	35x30 2.90			30x45 3.80	35x35 3.80					35x50 4.75				
39000			30x40 3.10	35x30 3.10			30x50 3.95	35x40 3.95									
47000			30x45 3.50	35x35 3.50				35x45 4.10									

WV		50				63				80				100			
Cap (µF)	Dia.	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
		560														22x25 1.05	
680														22x30 1.15	25x25 1.15		
820										22x25 1.05				22x30 1.35	25x25 1.35		
1000										22x30 1.15	25x25 1.15			22x35 1.50	25x30 1.50	30x25 1.50	
1200					22x25 0.54	25x25 1.20				22x35 1.32	25x30 1.3	30x25 1.55		22x40 1.70	25x40 1.70	30x25 1.70	
1500					22x30 1.20	25x25 1.20				22x35 1.55	25x30 1.55	30x25 1.55		22x45 2.05	25x40 2.05	30x30 2.05	
1800	22x25 1.20				22x30 1.45	25x25 1.45				22x40 1.80	25x30 1.80	30x25 1.80			25x45 2.50	30x35 2.50	35x30 2.50
2200	22x30 1.35	25x25 1.35			22x35 1.65	25x30 1.65	30x25 1.65			22x45 2.03	25x35 2.03	30x30 2.03			25x50 2.70	30x40 2.70	35x30 2.70
2700	22x30 1.60	25x25 1.60			22x40 1.83	25x35 1.83	30x25 1.83				25x45 2.25	30x35 2.25	35x30 2.25			30x45 2.85	35x35 2.85
3300	22x35 1.85	25x30 1.85	30x25 1.85		22x45 2.07	25x40 2.10	30x30 2.10	2.40			25x50 3.10	30x40 3.10	35x30 3.10			30x50 3.00	35x40 3.00
3900	22x40 1.95	25x35 1.95	30x25 1.95			25x45 2.50	30x35 2.50	35x30 2.50				30x45 2.70	35x40 2.70				35x45 3.20
4700	22x45 2.25	25x40 2.30	30x30 2.30			25x50 2.79	30x40 2.79	35x30 2.79				30x50 3.10	35x40 3.10				35x50 3.40
5600	22x50 2.65	25x45 2.65	30x35 2.65	35x30 2.65			30x45 3.15	35x35 3.15					35x40 3.50				
6800		25x50 2.80	30x40 2.80	35x30 2.80			30x50 3.50	35x40 3.50					35x50 3.80				
8200			30x45 3.50	35x35 3.50				35x45 3.90					35x70 4.55				
10000			30x50 3.80	35x40 3.80				35x50 4.40									
12000				35x45 4.05													

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WV Cap ( $\mu$ F)	160				180				200				250			
	Dia. 22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
150													22x25			
180													22x30	25x25		
220													22x35	25x25		
270	22x25				22x30	25x25			22x30	25x25			22x35	25x30	30x25	
330	22x30	25x25			22x30	25x25			22x35	25x30	30x25		22x45	25x35	30x25	
390	22x35	25x25			22x35	25x30	30x25		22x40	25x30	30x25		22x50	25x40	30x30	
470	22x40	25x30	30x25		22x40	25x35	30x25		22x45	25x35	30x30			25x45	30x35	35x30
560	22x45	25x35	30x25		22x45	25x35	30x30		22x50	25x40	30x30			25x50	30x40	35x30
680	22x50	25x40	30x30		22x50	25x40	30x30			25x50	30x35	35x30			30x45	35x35
820		25x45	30x35	35x30		25x50	30x35	35x30			30x40	35x35			30x50	35x40
1000		25x50	30x40	35x30			30x40	35x35			30x45	35x35				35x45
1200			30x45	35x35			30x45	35x40			30x50	35x40				
1500			30x50	35x40				35x45				35x50				
1800			35x45	3.10				3.15								

WV Cap ( $\mu$ F)	315				350				400				450			
	Dia. 22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
47													22x45			
56													22x30	25x25		
68									22x25				22x35	25x30		
82	22x25				22x25				22x30	25x25			22x40	25x35	30x25	
100	22x25				22x30	25x25			22x35	25x30			22x45	25x35	30x30	
120	22x30	25x25			22x35	25x25			22x40	25x35	30x25		22x50	25x40	30x30	
150	22x35	25x30	30x25		22x40	25x30	30x25		22x50	25x40	30x30			25x45	30x35	35x30
180	22x40	25x35	30x25		22x45	25x35	30x30			25x45	30x35	35x30		25x50	30x40	35x30
220	22x50	25x40	30x30		22x50	25x40	30x30			25x50	30x40	35x35			30x45	35x35
270		25x45	30x35	35x30		25x50	30x35	35x30			30x45	35x35			30x50	35x40
330		25x50	30x45	35x30			30x45	35x35			30x50	35x40				35x45
390			30x45	35x35			30x50	35x40				35x45				35x50
470			30x50	35x40				35x45				35x50				
560			35x50	1.52				1.52								