

# Snap-In Aluminum Electrolytic Capacitors



**MUH** Series

**MERITEK**

## FEATURES

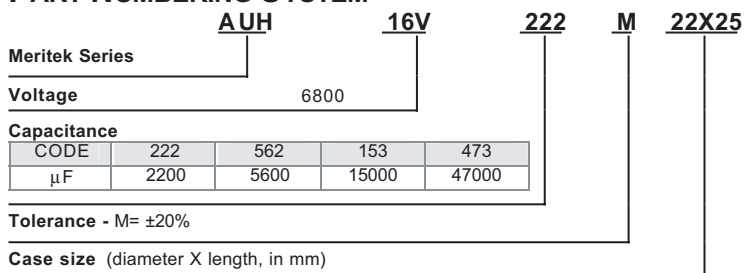
- 105°C standard
- High CV density
- Load life of 2,000 hours at 105°C



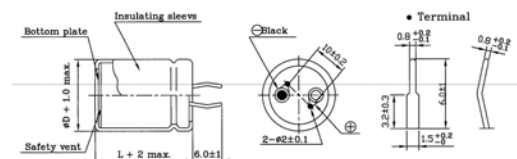
## SPECIFICATIONS

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 2 minutes) $I =$ Leakage current (µA) $C =$ Nominal capacitance (µF) $V =$ Rated voltage (VDC)																																				
Dissipation Factor Tand (120Hz, 20°C)	Add 0.02 per 100µF for capacitance greater than 100µF <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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Load Life	After applying rated working voltage for 2000 hours at 105°C and then being stabilized +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 +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	0.8	1.0	1.20	1010	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.

# Snap-In Aluminum Electrolytic Capacitors

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

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

# Snap-In Aluminum Electrolytic Capacitors

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WV Cap (µF)	160				180				200				250				
	Dia.	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
150														22x25			
														0.90			
180														22x30	25x25		
														1.00	1.00		
220														22x35	25x25		
														1.10	1.10		
270	22x25				22x30	25x25				22x30	25x25			22x35	25x30	30x25	
	0.90				0.95	0.95				1.00	1.00			1.20	1.20	1.20	
330	22x30	25x25			22x30	25x25				22x35	25x30	30x25		22x45	25x35	30x25	
	1.05	1.05			1.07	1.07				1.20	1.20	1.20		1.25	1.25	1.25	
390	22x35	25x25			22x35	25x30	30x25			22x40	25x30	30x25		22x50	25x40	30x30	
	1.22	1.20			1.22	1.25	1.22			1.32	1.30	1.30		1.50	1.50	1.50	
470	22x40	25x30	30x25		22x40	25x35	30x25			22x45	25x35	30x30			25x45	30x35	35x30
	1.30	1.35	1.30		1.35	1.35	1.35			1.45	1.45	1.45			1.75	1.75	1.70
560	22x45	25x35	30x25		22x45	25x35	30x30			22x50	25x40	30x30			25x50	30x40	35x30
	1.45	1.45	1.45		1.45	1.45	1.45			1.55	1.55	1.55			2.00	2.00	2.00
680	22x50	25x40	30x30		22x50	25x40	30x30				25x50	30x35	35x30			30x45	35x35
	1.65	1.65	1.65		1.60	1.62	1.62				1.75	1.75	1.75			2.10	2.10
820		25x45	30x35	35x30		25x50	30x35	35x30				30x40	35x35			30x50	35x40
		1.95	1.95	2.00		1.80	1.80	1.85				2.10	2.10			2.25	2.25
1000		25x50	30x40	35x30			30x40	35x35				30x45	35x35				35x45
		2.10	2.15	2.20			2.10	2.10				2.25	2.25				2.40
1200			30x45	35x35			30x45	35x40				30x50	35x40				
			2.35	2.30			2.35	2.35				2.65	2.65				
1500			30x50	35x40				35x45					35x50				
			2.70	2.65				2.70					3.10				
1800				35x45				35x50									
				3.10				3.15									

WV Cap (µF)	315				350				400				450				
	Dia.	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
47														22x45			
														0.37			
56														22x30	25x25		
														0.40	0.40		
68										22x25				22x35	25x30		
										0.52				0.52	0.52		
82	22x25				22x25					22x30	25x25			22x40	25x35	30x25	
	0.53				0.54					0.58	0.58			0.60	0.60	0.60	
100	22x25				22x30	25x25				22x35	25x30			22x45	25x35	30x30	
	0.59				0.63	0.63				0.65	0.65			0.65	0.65	0.65	
120	22x30	25x25			22x35	25x25				22x40	25x35	30x25		22x50	25x40	30x30	
	0.68	0.68			0.72	0.72				0.74	0.75	0.74		0.74	0.74	0.74	
150	22x35	25x30	30x25		22x40	25x30	30x25			22x50	25x40	30x30			25x45	30x35	35x30
	0.78	0.78	0.78		0.79	0.79	0.80			0.82	0.82	0.82			0.82	0.82	0.82
180	22x40	25x35	30x25		22x45	25x35	30x30				25x45	30x35	35x30		25x50	30x40	35x30
	0.88	0.88	0.85		0.88	0.88	0.90				0.95	0.95	0.95		0.97	0.97	0.95
220	22x50	25x40	30x30		22x50	25x40	30x30				25x50	30x40	35x35			30x45	35x35
	0.95	0.95	0.95		0.97	0.97	0.95				1.40	1.05	1.05			1.08	1.08
270		25x45	30x35	35x30		25x50	30x35	35x30				30x45	35x35			30x50	35x40
		1.10	1.10	1.10		1.15	1.12	1.15				1.22	1.22			1.25	1.25
330		25x50	30x45	35x30			30x45	35x35				30x50	35x40				35x45
		1.22	1.22	1.20			1.23	1.23				1.40	1.40				1.42
390			30x45	35x35			30x50	35x40					35x45				35x50
			1.32	1.30			1.32	1.32					1.55				1.55
470			30x50	35x40				35x45					35x50				
			1.42	1.40				1.40					1.63				
560				35x50				35x50									
				1.52				1.52									