

Snap-In Aluminum Electrolytic Capacitors



AHS Series

MERITEK

FEATURES

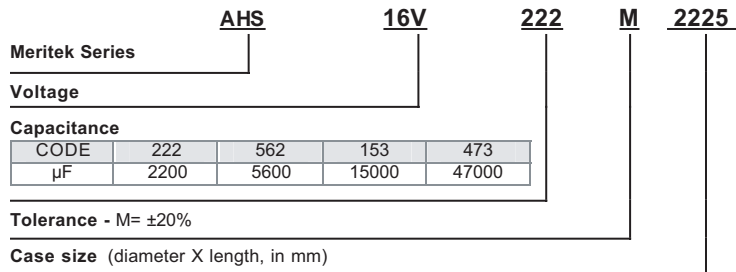
- 85°C standard
- Ideal for switching power supplies
- Low ESR, low dissipation
- Load life of 2,000 hours at 85°C



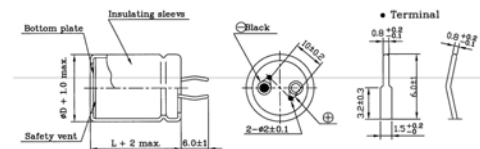
SPECIFICATIONS

Item	Characteristic																																				
Operating Temp Range	16V to 250V: -40°C to +85°C 315V to 450V: -25°C to +85°C																																				
Rated Working Voltage	16 to 450VDC																																				
Capacitance Tolerance	±20% (M)																																				
Leakage Current (20°C)	$I \leq 0.01CV + 10\mu A$, whichever is less (at 20°C after 3 minutes) I = Leakage current (μA) C = Nominal capacitance (μF) V = Rated voltage (VDC)																																				
Dissipation Factor Tan δ (120Hz, 20°C)	<table border="1"> <thead> <tr> <th>WV</th> <th>16 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>47-2200μF</td> <td>-</td> <td>0.2</td> <td>0.15</td> <td>0.1</td> <td>0.2</td> </tr> <tr> <td>2700-6800μF</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>0.5</td> <td>0.4</td> <td>0.3</td> <td>-</td> <td>-</td> </tr> <tr> <td>39000-47000μF</td> <td>0.7</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	WV	16 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	2700-6800 μF	0.30	0.25	0.2	-	-	8200 μF	0.35	0.3	0.25	-	-	10000-33000 μF	0.5	0.4	0.3	-	-	39000-47000 μF	0.7	-	-	-	-
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Low Temperature Characteristics	Impedance ratio at 120Hz <table border="1"> <thead> <tr> <th>WV</th> <th>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>6</td> </tr> <tr> <td>Z -40°C / Z 20°C</td> <td>8</td> <td>6</td> <td>6</td> <td>-</td> </tr> </tbody> </table>	WV	16	25 to 100	160 to 250	315 to 450	Z -25°C / Z 20°C	4	3	3	6	Z -40°C / Z 20°C	8	6	6	-																					
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Load Life	After applying rated working voltage for 2000 hours at 85°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 85°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>≤ 200% of 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	≤ 200% of 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	1.25	1.35	1.40

Temperature

Temperature	45°C	60°C	70°C	85°C
Factor	1.48	1.30	1.15	1.0

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W.V(V) Cap (µF)	16(1C)				25(1E)				35(1V)				50(1H)			
	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35
2200									22x30				22x25	25x25		
2700									2.05				1.90	2.05		
3300													22x30	25x25	30x25	
3900									2.20				2.25	2.25	2.30	
4700			30x40		22x25				2.25	2.25			2.50	2.50	2.50	
5600			2.10		2.20				2.35	2.35			2.65	2.65	2.65	
6800					22x30	25x25			2.40	2.40	30x25		2.95	3.00	3.00	
8200	22x25				2.80	2.70	2.80		2.55	2.50	2.55		2.80	3.80	3.80	3.80
10000	2.50								3.04	3.10	3.10					
12000	22x30	25x25			22x40	25x35	30x25		22x50	25x40	30x30				30x45	35x35
15000	2.65	2.65			3.10	3.10	3.10		3.65	3.65	3.65				4.20	4.20
18000	22x35	25x25		35x10	22x45	25x40	30x30			25x45	30x35	35x30			30x50	35x40
22000	3.10	3.10		3.25	3.57	3.65	3.65			4.00	4.10	4.00			4.80	4.80
27000	22x40	25x30	30x25		22x50	25x45	30x35	35x30		25x50	30x40	35x35			30x50	35x45
33000	3.55	3.38	3.55		3.88	4.00	4.00	4.00		4.15	4.45	4.45			4.65	5.20
39000	22x45	25x35	30x30			25x50	30x40	35x35			30x45	35x40				35x50
47000	4.10	4.10	4.10			4.45	4.45	4.45			5.20	5.20				6.10
	22x50	25x40	30x30				30x45	35x40				35x45				35x60
	4.50	4.35	4.35				5.20	5.20				6.10				6.45
		25x45	30x35	35x30			30x50	35x40				35x50				
		4.70	4.60	4.70			6.10	6.10				6.40				
			30x40	35x35				35x50								
			5.25	5.25				6.45								
			30x45	35x35												
			5.60	5.60												
			30x50	35x40												
			5.85	5.85												

W.V(V) Cap (µF)	63(1J)				80(1K)				100(2A)						
	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35			
820									22x25						
1000					22x25				1.50			22x30	25x25		
1200					1.65		25x25		1.65			22x35	25x25	30x25	
1500	22x25				22x30	25x25			1.80	1.80		22x40	25x30	30x25	
1800	1.70				1.80	1.80			2.30	2.20	2.30	2.30	2.20	2.30	
2200	22x30	25x25			22x35	25x30	30x25		2.50	2.50	2.50	2.50	2.50	2.50	
2700	1.90	1.90			2.20	2.20	2.20		2.80	2.80	2.80	2.80	2.80	2.80	
3300	22x30	25x25			22x40	25x35	30x25		2.80	2.80	2.80	2.80	2.80	2.80	
3900	2.20	2.2			2.50	2.50	2.50								
4700	22x35	25x30	30x25		22x45	25x40	30x30								
5600	2.40	2.40	2.40		2.60	2.70	2.70						25x50	30x35	35x30
6800	22x40	25x35	30x25		22x50	25x45	30x35	35x30					3.20	3.10	3.10
8200	2.70	2.70	2.70		2.90	3.00	3.00	3.00						3.40	3.40
10000	22x45	25x40	30x30			25x50	30x40	35x30						30x40	35x35
12000	2.90	2.90	2.90			3.20	3.20	3.20						3.80	3.80
15000	22x50	25x45	30x30				30x45	35x35							35x45
18000	3.04	3.10	3.10				3.50	3.50							4.00
22000		25x50	30x40	35x30			30x50	30x40							35x50
27000		3.40	3.40	3.40			3.90	3.90							4.30
33000			30x45	35x35				35x45							4.30
39000			3.90	3.90				4.30							
47000			30x50	35x35				35x50							
			4.40	4.40				4.90							
				35x40				35x70							35x70
				4.90				5.20							4.55
				35x45				5.10							
				5.40											
				35x60											
				5.90											
				35x70											
				6.00											
				35x60				35x60							35x60
				5.10				5.00							4.50
				35x60				5.10							
				5.60											
				35x60											
				6.10											
				35x60											
				6.40											
				35x70											
				6.40											

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W.V(V)		160(2C)				180(2S)				200(2D)				250(2E)			
Cap (μF)	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	
180													22x25 1.00				
220	22x25 1.25								22x25 1.15	25x25 1.10			22x30 1.25	25x25 1.25			
270					22x25 1.30				22x30 1.35	25x25 1.35			22x35 1.40	25x30 1.45	30x25 1.40		
330	22x25 1.43				22x30 1.45	25x25 1.45			22x30 1.50	25x25 1.50			22x40 1.50	25x30 1.45	30x25 1.50		
390	22x30 1.55	25x25 1.55			22x35 1.60	25x25 1.60			22x35 1.70	25x30 1.75	30x25 1.70		22x45 1.80	25x35 1.80	30x30 1.80		
470	22x30 1.95	25x25 1.95			22x35 1.98	25x30 1.98	30x25 1.98		22x40 2.05	25x35 2.05	30x25 2.05		22x50 2.10	25x40 2.10	30x30 2.10		
560	22x35 2.01	25x30 2.01	30x25 2.01		22x40 2.05	25x35 2.05	30x25 2.05		22x45 2.10	25x35 2.10	30x30 2.10			25x45 2.20	30x35 2.20	35x30 2.20	
680	22x40 2.22	25x35 2.22	30x30 2.22		22x50 2.30	25x40 2.30	30x30 2.30		22x45 2.35	25x40 2.40	30x30 2.40			25x50 2.50	30x40 2.50	35x30 2.50	
820	22x50 2.60	25x40 2.60	30x30 2.60		22x50 2.30	25x45 2.65	30x35 2.65	35x30 2.65	22x45 2.70	25x50 2.70	30x40 2.75	35x30 2.70			30x45 2.80	35x35 2.80	
1000	22x50 2.85	25x45 3.02	30x35 3.02	35x30 3.02		25x50 3.05	30x40 3.05	35x35 3.05			30x45 3.15	35x35 3.10			30x50 3.25	35x40 3.25	
1200		25x50 3.29	30x40 3.29	35x35 3.29			30x45 3.35	35x35 3.30		25x50 3.35	30x50 3.40	35x40 3.40			30x50 3.40	35x50 3.50	
1500			30x45 3.80	35x40 3.80			30x50 3.90	35x40 3.95				35x50 4.10					
1800			30x50 4.27	35x40 4.27				35x50 4.30				35x50 4.30					
2200				35x50 4.50													

W.V		315(2F)				350(2V)				400(2G)				420(2Y)	450(2W)			
Cap (μF)	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 20	φ 22	φ 25	φ 30	φ 35	φ 35	φ 22	φ 25	φ 30	φ 35
47										22x25 0.50					22x25 0.45			
56										22x25 0.50					22x25 0.50			
68									20x30 0.50	22x25 0.60	25x25 0.80				22x30 0.60	25x25 0.60		
82					22x25 0.65					22x30 0.65	25x25 0.65				22x30 0.65	25x25 0.65		
100	22x25 0.65				22x30 0.68	25x25 0.68				22x30 0.75	25x25 0.75				22x35 0.75	25x30 0.75	30x25 0.75	
120	22x30 0.75	25x25 0.75			22x30 0.85	25x25 0.85				22x35 0.90	25x30 0.92	30x25 0.92			22x40 0.92	25x35 0.92	30x25 0.92	
150	22x35 0.85	25x25 0.85			22x35 1.00	25x30 1.00	30x25 1.00			22x40 1.05	25x30 1.07	30x25 1.05			22x50 1.10	25x40 1.10	30x30 1.10	
180	22x35 1.00	25x30 1.00	30x25 1.05		22x40 1.10	25x35 1.10	30x25 1.10			22x45 1.20	25x35 1.20	30x30 1.20				25x45 1.20	30x35 1.20	35x30 1.20
220	22x40 1.20	25x35 1.15	30x25 1.15		22x45 1.30	25x40 1.30	30x30 1.30			22x50 1.35	25x40 1.35	30x35 1.35	35x30 1.35			25x50 1.40	30x40 1.40	35x30 1.40
270	22x45 1.30	25x40 1.32	30x30 1.30		25x45 1.53	30x35 1.50	35x30 1.50				25x45 1.60	30x40 1.62	35x30 1.60			25x50 1.55	30x45 1.65	35x35 1.65
330	22x50 1.50	25x45 1.55	30x35 1.55	35x30 1.55	25x50 1.70	30x40 1.70	35x30 1.70				25x45 1.75	30x45 1.85	35x35 1.85			25x50 1.80	30x50 1.90	35x40 1.90
390		25x50 1.70	30x40 1.70	35x35 1.70		30x45 1.90	35x35 1.90				25x50 1.95	30x50 2.08	35x40 2.08					35x45 2.10
470			30x45 1.90	35x35 1.90		30x50 2.20	35x40 2.20					30x50 2.30	35x45 2.38					35x50 2.50
560			30x50 2.20	35x40 2.20			35x45 2.50					30x50 2.50	35x50 2.65					
680				35x45 2.50			35x50 2.90						35x50 2.85					35x60 4.55
820				35x50 2.80									35x60 3.55					
1000				35x50 3.10														

I_R : Maxium permissible ripple current [A(rms) at 85°C, 120Hz]
Case size[φ DxL (mm)]