Snap-In Aluminum Electrolytic Capacitors

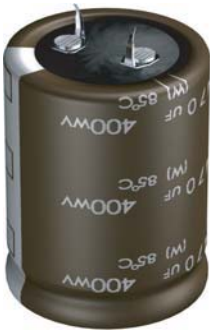
RoHS

MHS 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 + 85C 315V to 450V: -25°C to +85C
Rated Working Voltage	16 to 450VDC
Capacitance Tolerance	±20% (M)
Leakage Current (20°C)	I≤0.01CV + 10μA, whichever is less (at 20°C after 3 minutes) I= Leakage current (μA) C= Nominal capacitance(μF) V= Rated voltage (VDC)
Dissipation Factor Tanδ (120Hz, 20°C)	
Low Temperature Characteristics	Impedance ratio at 120Hz
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.
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.

WV	16 to 25	35 to 50	63 to 100	160 to 250	315 to 450
47-2200μF	-	0.2	0.15	0.1	0.2
2700-6800μF	0.30	0.25	0.2	-	-
8200μF	0.35	0.3	0.25	-	-
10000-33000μF	0.5	0.4	0.3	-	-
39000-47000μF	0.7	-	-	-	-

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	-

Capacitance change	Within ±20% of the initial value
Dissipation Factor	≤ 200% of the initial specified value
Leakage current	≤ The initial specified value

Capacitance change	Within ±20% of the initial value
Dissipation Factor	≤ 150% of the initial specified value
Leakage current	≤ 200% of the initial specified value

PART NUMBERING SYSTEM

MHS 16V 222 M 22X25

Meritek Series

Voltage

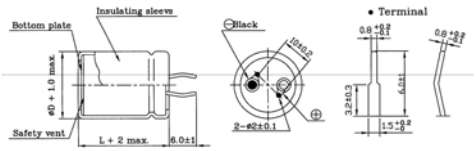
Capacitance

CODE	222	562	153	473
μF	2200	5600	15000	47000

Tolerance - M= ±20%

Case size (diameter X length, in mm)

DIMENSIONS



RIPPLE CURRENT COEFFICIENT

Frequency

Freq (Hz) / WV (V)	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

Specifications are subject to change without notice.

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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 2.05				22x25 1.90	25x25 2.05		
2700													22x30 2.10	25x25 2.10		
3300									22x25 2.20				22x30 2.25	25x25 2.25	30x25 2.30	
3900									22x30 2.25	25x25 2.25			22x35 2.50	25x30 2.50	30x25 2.50	
4700			30x40 2.10		22x25 2.20				22x30 2.35	25x25 2.35			22x40 2.65	25x35 2.65	30x25 2.65	
5600					22x30 2.40	25x25 2.40			22x35 2.55	25x30 2.50	30x25 2.55		22x45 2.95	25x40 3.00	30x30 3.00	
6800					22x35 2.55	25x25 2.55			22x40 2.80	25x35 2.82	30x25 2.80		22x50 3.30	25x45 3.30	30x35 3.30	35x30 3.30
8200	22x25 2.50				22x40 2.80	25x30 2.70	30x25 2.80		22x45 3.04	25x40 3.10	30x30 3.10			25x50 3.80	30x40 3.80	35x30 3.80
10000	22x30 2.65	25x25 2.65			22x40 3.10	25x35 3.10	30x25 3.10		22x50 3.65	25x40 3.65	30x30 3.65				30x45 4.20	35x35 4.20
12000	22x35 3.10	25x25 3.10		35x10 3.25	22x45 3.57	25x40 3.65	30x30 3.65			25x45 4.00	30x35 4.10	35x30 4.00			30x50 4.80	35x40 4.80
15000	22x40 3.55	25x30 3.38	30x25 3.55		22x50 3.88	25x45 4.00	30x35 4.00	35x30 4.00		25x50 4.15	30x40 4.45	35x35 4.45			30x50 4.65	35x45 5.20
18000	22x45 4.10	25x35 4.10	30x30 4.10			25x50 4.45	30x40 4.45	35x35 4.45			30x45 5.20	35x40 5.20				35x50 6.10
22000	22x50 4.50	25x40 4.35	30x30 4.35				30x45 5.20	35x40 5.20				35x45 6.10				35x60 6.45
27000		25x45 4.70	30x35 4.60	35x30 4.70			30x50 6.10	35x40 6.10				35x50 6.40				
33000			30x40 5.25	35x35 5.25				35x50 6.45								
39000			30x45 5.60	35x35 5.60												
47000			30x50 5.85	35x40 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 1.50			
1000					22x25 1.50				22x30 1.70	25x25 1.70		
1200					22x30 1.65	25x25 1.65			22x35 1.85	25x25 1.80	30x25 1.85	
1500	22x25 1.70				22x30 1.80	25x25 1.80			22x40 2.30	25x30 2.20	30x25 2.30	
1800	22x30 1.90	25x25 1.90			22x35 2.20	25x30 2.20	30x25 2.20		22x45 2.50	25x40 2.50	30x30 2.50	
2200	22x30 2.20	25x25 2.2			22x40 2.50	25x35 2.50	30x25 2.50		22x50 2.80	25x45 2.80	30x30 2.80	
2700	22x35 2.40	25x30 2.40	30x25 2.40		22x45 2.60	25x40 2.70	30x30 2.70			25x50 3.20	30x35 3.10	35x30 3.10
3300	22x40 2.70	25x35 2.70	30x25 2.70		22x50 2.90	25x45 3.00	30x35 3.00	35x30 3.00			30x40 3.40	35x35 3.40
3900	22x45 2.90	25x40 2.90	30x30 2.90			25x50 3.20	30x40 3.20	35x30 3.20			30x50 3.80	35x40 3.80
4700	22x50 3.04	25x45 3.10	30x30 3.10				30x45 3.50	35x35 3.50				35x45 4.00
5600		25x50 3.40	30x40 3.40	35x30 3.40			30x50 3.90	30x40 3.90				35x50 4.30
6800			30x45 3.90	35x35 3.90				35x45 4.30				
8200			30x50 4.40	35x35 4.40				35x50 4.90				
10000				35x40 4.90				35x70 5.20				35x70 4.55
12000				35x45 5.40				35x60 5.10				
15000				35x60 5.90								
22000				35x70 6.00								
10000				35x60 5.10				35x60 5.00				35x60 4.50
12000				35x60 5.60				35x60 5.10				
15000				35x60 6.10								
22000				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)]