

# Gnap- $\pi$ Aluminum Electrolytic Capacitors



RoHS

MHD Series

MERITEK

## FEATURES

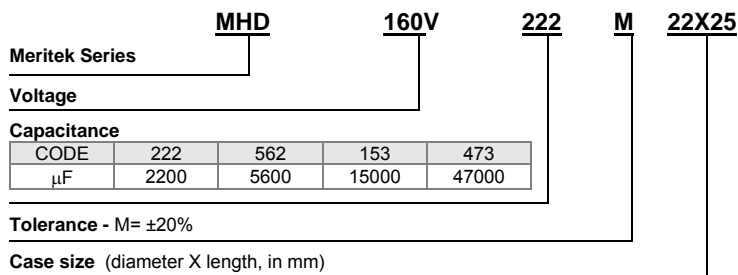
- PCB Mounting
- More compact electronic equipment
- Lengths are all 20mm, Down size
- Load life of 2,000 hours at 85°C



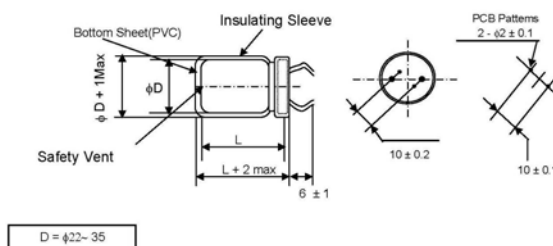
## SPECIFICATIONS

Item	Characteristic									
Operating Temp Range	160V-250V: -40°C to +85°C 350V-400V: -25°C to +85°C									
Rated Working Voltage	160 to 400VDC									
Capacitance Tolerance	±20% (M)									
Leakage Current (20°C)	$I \leq 0.02CV$ or 2mA, whichever is less (at 20°C after 5 minutes) $I =$ Leakage current ( $\mu$ A) $C =$ Nominal capacitance ( $\mu$ F) $V =$ Rated voltage (VDC)									
Dissipation Factor Tan $\delta$ (120Hz, 20°C)	<table border="1"> <tr> <td>Tan<math>\delta</math> (120Hz, 20°C)</td> <td>160 to 250</td> <td>350 to 400</td> </tr> <tr> <td></td> <td>0.10</td> <td>0.20</td> </tr> </table>	Tan $\delta$ (120Hz, 20°C)	160 to 250	350 to 400		0.10	0.20			
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Low Temperature Characteristics	Impedance ratio at 120 Hz <table border="1"> <tr> <td>WV</td> <td>160 to 250</td> <td>350 to 450</td> </tr> <tr> <td>Z -25°C/Z 20°C</td> <td>4</td> <td>8</td> </tr> <tr> <td>Z -40°C/Z 20°C</td> <td>12</td> <td>-</td> </tr> </table>	WV	160 to 250	350 to 450	Z -25°C/Z 20°C	4	8	Z -40°C/Z 20°C	12	-
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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"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial value</td> </tr> <tr> <td>Dissipation</td> <td>≤ ±200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial value	Dissipation	≤ ±200% of the initial specified value	Leakage current	≤ The initial specified value			
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Dissipation	≤ ±200% of the initial specified value									
Leakage current	≤ The initial specified value									
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"> <tr> <td>Capacitance change</td> <td>Within ±15% of the initial value</td> </tr> <tr> <td>Dissipation</td> <td>≤ 150% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	Within ±15% of the initial value	Dissipation	≤ 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
160 to 250	0.82	1.0	1.20	1.37	1.45	1.50
350 to 400	0.82	1.0	1.18	1.23	1.35	1.40

### Temperature

Temperature	≤ 45°C	60°C	70°C	85°C
Factor	1.45	1.30	1.15	1.00



W.V(V) Cap (μF)	160(2C)				200(2D)				250(2E)			
	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35
100									22x20 0.65			
150					22x20 0.75						30x20 0.87	
220	22x20 0.85					25x20 0.95					30x20 1.10	
270		25x20 1.10					30x20 1.25					35x20 1.28
330			30x20 1.20				30x20 1.40					35x20 1.45
390			30x20 1.35					35x20 1.60				
470				35x20 1.50				35x20 1.80				
560				35x20 1.65								

W.V(V) Cap (μF)	350(2V)				400(2G)			
	φ 22	φ 25	φ 30	φ 35	φ 22	φ 25	φ 30	φ 35
47					22x20 0.35			
56						25x20 0.40		
68						25x20 0.46		
82						25x20 0.60		
100		25x20 0.70					30x20 0.72	
120		25x20 0.75						35x20 0.80
150			30x20 0.80					35x20 0.86
180				35x20 0.87				35x20 0.92

$I_R$  : Maxium permissible ripple current [A(rms) at 105°C,120Hz]  
 Case size [φ DxL (mm)]