

# Snap-In Aluminum Electrolytic Capacitors



## MUX Series

## MERITEK

### FEATURES

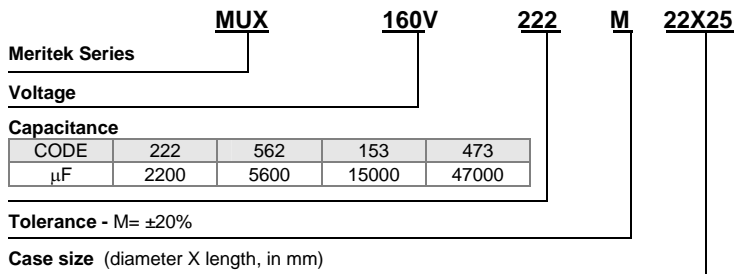
- PCB Mounting, Low profile( Smaller than MUH)
- More compact electronic equipment
- High CV density
- Load life of 2,000 hours at 105°C



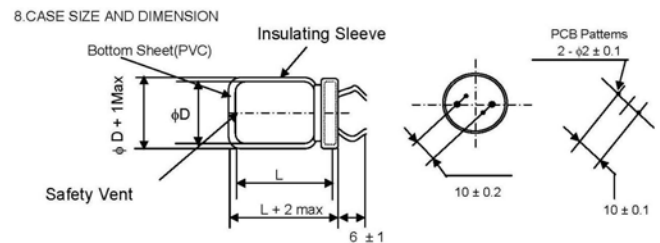
### SPECIFICATIONS

Item	Characteristic									
Operating Temp Range	160V-250V: -40°C to +105°C 315V-450V: -25°C to +105°C									
Rated Working Voltage	160 to 450VDC									
Capacitance Tolerance	±20% (M)									
Leakage Current (20°C)	$I \leq 0.02CV$ or 2mA, whichever is less (at 20°C after 2 minutes) $I$ = Leakage current ( $\mu$ A) $C$ = Nominal capacitance ( $\mu$ F) $V$ = Rated voltage (VDC)									
Dissipation Factor Tan $\delta$ (120Hz, 20°C)	Add 0.02 per 100 $\mu$ F for capacitance greater than 100 $\mu$ F <table border="1"> <tr> <td>Tan<math>\delta</math> (120Hz, 20°C)</td> <td>160 to 250</td> <td>315 to 450</td> </tr> <tr> <td></td> <td>0.15</td> <td>0.20</td> </tr> </table>	Tan $\delta$ (120Hz, 20°C)	160 to 250	315 to 450		0.15	0.20			
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	0.15	0.20								
Low Temperature Characteristics	Impedance ratio at 120 Hz <table border="1"> <tr> <td>WV</td> <td>160 to 250</td> <td>315 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	315 to 450	Z -25°C/Z 20°C	4	8	Z -40°C/Z 20°C	12	-
WV	160 to 250	315 to 450								
Z -25°C/Z 20°C	4	8								
Z -40°C/Z 20°C	12	-								
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"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial value</td> </tr> <tr> <td>Tan<math>\delta</math></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	Tan $\delta$	≤ ±200% of the initial specified value	Leakage current	≤ The initial specified value			
Capacitance change	Within ±20% of the initial value									
Tan $\delta$	≤ ±200% of the initial specified value									
Leakage current	≤ The initial specified value									
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"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial value</td> </tr> <tr> <td>Tan<math>\delta</math></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 ±20% of the initial value	Tan $\delta$	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value			
Capacitance change	Within ±20% of the initial value									
Tan $\delta$	≤ 150% of the initial specified value									
Leakage current	≤ The initial specified value									

### PART NUMBERING SYSTEM



### DIMENSIONS



$$D = \phi 22 \sim 35$$

### RIPPLE CURRENT COEFFICIENT

#### Frequency

WV (V)	Freq (Hz)				
	50	120	1K	10K	100K
160 to 250	0.80	1.0	1.25	1.40	1.50
315 to 450	0.84	1.0	1.15	1.20	1.32

#### Temperature

Temperature	≤ 45°C	60°C	85°C	105°C
Factor	0.40	2.20	1.65	1.00

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W.V Cap (μF)	160(2C)				180(2S)				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	φ 22	φ 25	φ 30	φ 35	
180													22x25				
													0.75				
220													22x30	25x25			
													0.95	0.95			
270					22x25				22x25				22x35	25x30			
					0.95				0.95				1.20	1.20			
330	22x25				22x30				22x30	25x25			22x40	25x30	30x25		
	1.15				1.17				1.20	1.20			1.25	1.25	1.25		
390	22x30				22x30	25x25			22x35	25x30	30x25		22x45	25x35	30x30		
	1.27				1.30	1.30			1.37	1.37	1.48		1.45	1.45	1.45		
470	22x35	25x25			22x35	25x30			22x40	25x30	30x30		22x50	25x40	30x30	35x25	
	1.40	1.40			1.42	1.42			1.48	1.48	1.60		1.55	1.55	1.55	1.55	
560	22x40	25x30			22x40	25x35	30x25		22x45	25x35	30x30	35x25		25x45	30x35	35x30	
	1.52	1.52			1.53	1.53	1.52		1.57	1.57	1.80	1.78		1.80	1.78	1.80	
680	22x45	25x35	30x30		22x45	25x40	30x30		22x50	25x40	30x35	35x30		25x50	30x40	35x35	
	1.72	1.70	1.70		1.73	1.75	1.75		1.80	1.80	2.10	2.15		2.05	2.05	2.08	
820	22x50	25x40	30x30	35x25	22x50	25x45	30x35	35x25		25x50	30x45	35x35				30x45	35x35
	2.05	2.05	2.00	2.00	2.08	2.08	2.05	2.05		2.15	2.40	2.40				2.20	2.20
1000		25x45	30x35	35x30		25x50	30x40	35x30			30x50	35x40				30x50	35x40
		2.25	2.25	2.25		2.30	2.30	2.25			2.58	2.58				2.45	2.45
1200		25x50	30x40	35x30			30x45	35x35				35x45					35x45
		2.50	2.50	2.45			2.52	2.52				3.05					2.60
1500			30x45	35x35			30x50	35x40			30x50	35x50					35x45
			2.80	2.80			2.90	2.90			3.10	3.40					3.70
1800			30x50	35x45				35x45				35x50					35x60
			3.30	3.30				3.35				3.55					4.20
2200				35x50				35x50				35x60					
				3.75				3.75				4.10					

W.V(V) Cap (μF)	315(2F)				350(2V)				400(2G)					450(2W)				
	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 40	φ 22	φ 25	φ 30	φ 35	φ 40
56									22x25					22x25				
									0.45					0.44				
68									22x25					22x30	25x25			
									0.50					0.50	0.50			
82									22x30	25x25				22x35	25x30			
									0.57	0.57				0.57	0.57			
100	22x25				22x25				22x35	25x30				22x40	25x30	30x25		
	0.68				0.69				0.70	0.7				0.72	0.72	0.72		
120	22x30	25x25			22x30	25x25			22x40	25x30	30x25			22x45	25x30	30x30		
	0.75	0.75			0.75	0.75			0.77	0.76	0.76			0.77	0.77	0.77		
150	22x35	25x30			22x35	25x30			22x45	25x35	30x30			22x50	25x40	30x30		
	0.80	0.80			0.82	0.82			0.84	0.84	0.84			0.85	0.85	0.85		
180	22x40	25x30	30x25		22x45	25x35	30x25		22x50	25x40	30x30	35x25			25x45	30x35	35x30	
	0.91	0.91	0.90		0.94	0.92	0.92		0.94	0.94	0.94	0.94			0.95	0.94	1.05	
220	22x45	25x35	30x30		22x50	25x40	30x30	35x25		25x45	30x35	35x30			25x50	30x40	35x30	
	1.00	1.00	1.02		1.04	1.04	1.02	1.02		1.08	1.08	1.08			1.10	1.10	1.10	
270	22x50	25x40	30x35	35x25		25x45	30x35	35x30		25x50	30x40	35x30				30x45	35x35	
	1.12	1.12	1.12	1.12		1.15	1.15	1.15		1.22	1.22	1.22				1.25	1.25	
330		25x45	30x35	35x30		25x50	30x40	35x35			30x45	35x35				30x50	35x40	
		1.32	1.32	1.32		1.35	1.35	1.35			1.40	1.40				1.43	1.43	
390			30x40	35x35			30x45	35x40			30x50	35x40						35x45
			1.44	1.44			1.50	1.50			1.55	1.55						1.60
470			30x45	35x40				35x45			30x50	35x45						35x50
			1.65	1.65				1.75			1.60	1.75						1.75
560			30x50	35x45				35x50				35x50						
			1.85	1.85				1.95				2.00						
680				35x50								35x50						35x60
				2.10								2.85						3.15
820													40x60					
													3.10					
1000																		40x60
																		4.15

I<sub>R</sub> : Maxium permissible ripple current [A(rms) at 105°C,120Hz]  
Case size [φ DxL (mm)]