

Snap-In Aluminum Electrolytic Capacitors



MUX Series

MERITEK

FEATURES

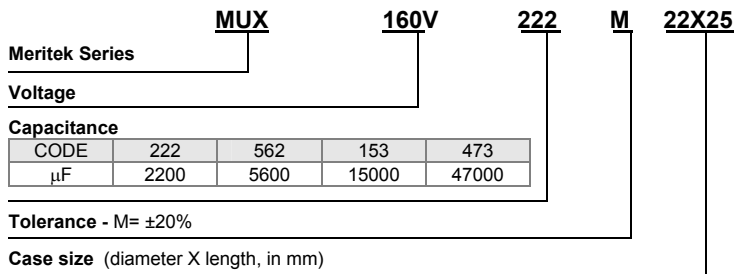
- PCB Mounting, Low profile(Smaller than MUH)
- More compact electronic equipment
- High CV density
- Load life of 2,000 hours at 105°C



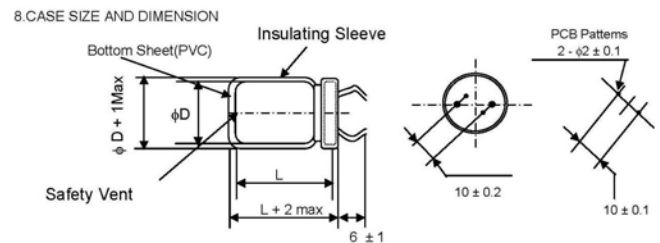
SPECIFICATIONS

| 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 5 minutes) I = Leakage current (μA) C = Nominal capacitance (μF) V = Rated voltage (VDC) | | | | | | | | | |
| Dissipation Factor Tanδ (120Hz, 20°C) | <table border="1"> <tr> <td>Tanδ (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> | Tanδ (120Hz, 20°C) | 160 to 250 | 315 to 450 | | 0.15 | 0.20 | | | |
| Tanδ (120Hz, 20°C) | 160 to 250 | 315 to 450 | | | | | | | | |
| | 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 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>Tanδ</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 | Tanδ | ≤ ±200% of the initial specified value | Leakage current | ≤ The initial specified value | | | |
| Capacitance change | Within ±20% of the initial value | | | | | | | | | |
| Tanδ | ≤ ±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 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>Tanδ</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 | Tanδ | ≤ 150% of the initial specified value | Leakage current | ≤ The initial specified value | | | |
| Capacitance change | Within ±20% of the initial value | | | | | | | | | |
| Tanδ | ≤ 150% of the initial specified value | | | | | | | | | |
| Leakage current | ≤ The initial specified value | | | | | | | | | |

PART NUMBERING SYSTEM



DIMENSIONS



D = φ 22~35

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 | 2.40 | 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_R : Maxium permissible ripple current [A(rms) at 105°C, 120Hz]
 Case size [φ DxL (mm)]