

Aluminum Electrolytic Capacitors Surface Mount Type

SHT series

MERITEK

FEATURE

- General Purpose Series
- Applications: Suitable for AV (TV, Video, Audio), Monitor/Computer, Home appliance, OA/HA/Communication, Industrial, Automobile, Meter.
- Load life: 105°C



| Diameter (mm) | Load Life (Hours) |
|---------------|-------------------|
| 4.0 ~ 10.0 | 1000 |



SPECIFICATIONS

| Item | Characteristic | | | | | | | | | | |
|---|--|---------------------------|------|------|------|----|----|----|----|--|--|
| Operating Temperature | -55°C ~ 105°C | | | | | | | | | | |
| Rated Working Voltage | 4VDC ~ 100VDC | | | | | | | | | | |
| Nominal Capacitance | 1 μF ~ 1500 μF, ±20% (at 20°C, 120HZ) | | | | | | | | | | |
| Leakage Current | $I_L \leq 0.01CV$ or 3 μA whichever is greater after 2 minutes at 20°C I _L : Leakage Current (μA) C: Nominal Capacitance (μF) V: Rated Voltage (V) | | | | | | | | | | |
| Ripple Current Coefficient, Frequency | Frequency (Hz) | 60 | 120 | 1K | 10K | -- | -- | -- | -- | -- | |
| | Coefficient | 0.85 | 1.00 | 1.15 | 1.25 | -- | -- | -- | -- | -- | |
| Low Temperature Stability, Impedance Ratio at 120Hz | Working Voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | |
| | Z-25°C / Z+20°C | 7 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | Z-40°C / Z+20°C | 15 | 8 | 6 | 4 | 4 | 3 | 3 | 3 | 3 | |
| Load Life | Capacitance | ≤ ±20% of initial value | | | | | | | | Apply Working Voltage for Rated Load Life / Temperature Stabilized at +20°C. | |
| | Dissipation Factor | ≤ 200% of initial value | | | | | | | | | |
| | Leakage Current | ≤ Initial specified value | | | | | | | | | |
| Shelf Life | Capacitance | ≤ ±20% of initial value | | | | | | | | After storage condition without voltage applied for 1000 hours at Rated Temperature, Stabilizing for 1 to 2 hours. | |
| | Dissipation Factor | ≤ 200% of initial value | | | | | | | | | |
| | Leakage Current | ≤ Initial specified value | | | | | | | | | |
| Resistance to Soldering Heat | Capacitance | ≤ ±20% of initial value | | | | | | | | For other procedures than those specified, Soldering iron method: Temperature: 260±5°C. Application time of soldering iron: 10 sec | |
| | Dissipation Factor | ≤ specified value | | | | | | | | | |
| | Leakage Current | ≤ specified value | | | | | | | | | |

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STANDARD RATING

| Rated Voltage | Rated Capacitance | | Case Size | Tan δ | Ripple Current | |
|---------------|-------------------|------------|-----------|--------------|----------------|------|
| | (VDC) | (μ F) | | | | Code |
| 4 | | 22 | 220 | 4x5.4 | 0.35 | 20 |
| | | 33 | 33 | 4x5.4 | 0.35 | 26 |
| | | 47 | 470 | 4x5.4 | 0.35 | 34 |
| | | 100 | 101 | 5x5.4 | 0.35 | 61 |
| | | 220 | 221 | 6.3x5.4 | 0.35 | 82 |
| 6.3 | | 22 | 220 | 4x5.4 | 0.30 | 29 |
| | | 33 | 330 | 4x5.4 | 0.30 | 43 |
| | | 47 | 470 | 4x5.4 | 0.30 | 43 |
| | | 47 | 470 | 5x5.4 | 0.30 | 46 |
| | | 100 | 101 | 5x5.4 | 0.30 | 47 |
| | | 100 | 101 | 6.3x5.4 | 0.30 | 71 |
| | | 220 | 221 | 6.3x5.4 | 0.30 | 74 |
| | | 220 | 221 | 6.3x7.7 | 0.30 | 120 |
| | | 330 | 331 | 6.3x7.7 | 0.30 | 175 |
| | | 330 | 331 | 8X10.2 | 0.35 | 230 |
| | | 470 | 471 | 8x10.2 | 0.35 | 300 |
| | | 1000 | 102 | 8x10.2 | 0.35 | 300 |
| | | 1000 | 102 | 10x10.2 | 0.35 | 400 |
| | | 1500 | 152 | 10x10.2 | 0.35 | 480 |
| 10 | | 10 | 100 | 4x5.4 | 0.22 | 24 |
| | | 22 | 220 | 4x5.4 | 0.22 | 36 |
| | | 33 | 330 | 4x5.4 | 0.22 | 45 |
| | | 33 | 330 | 5x5.4 | 0.22 | 46 |
| | | 47 | 470 | 5x5.4 | 0.22 | 46 |
| | | 47 | 470 | 6.3X5.4 | 0.22 | 70 |
| | | 100 | 101 | 6.3x5.4 | 0.22 | 71 |
| | | 100 | 101 | 6.3X7.7 | 0.22 | 110 |
| | | 150 | 151 | 6.3X5.4 | 0.22 | 86 |
| | | 220 | 221 | 6.3x7.7 | 0.22 | 115 |
| | | 220 | 221 | 8X10.2 | 0.26 | 160 |
| | | 330 | 331 | 8x10.2 | 0.26 | 200 |
| | | 470 | 471 | 8x10.2 | 0.26 | 230 |
| | | 470 | 471 | 10x10.2 | 0.26 | 270 |
| | 16 | | 4.7 | 4R7 | 4x5.4 | 0.16 |
| | | 10 | 100 | 4x5.4 | 0.16 | 28 |
| | | 22 | 220 | 4X5.4 | 0.16 | 28 |
| | | 22 | 220 | 5x5.4 | 0.16 | 39 |
| | | 33 | 330 | 5x5.4 | 0.16 | 39 |
| | | 33 | 330 | 6.3x5.4 | 0.16 | 65 |
| | | 47 | 470 | 5x5.4 | 0.16 | 39 |
| | | 47 | 470 | 6.3x5.4 | 0.16 | 70 |
| | | 100 | 101 | 6.3x5.4 | 0.16 | 80 |
| | | 100 | 101 | 6.3x7.7 | 0.16 | 130 |

| Rated Voltage | Rated Capacitance | | Case Size | Tan δ | Ripple Current | | |
|---------------|-------------------|------------|-----------|--------------|----------------|------|------|
| | (VDC) | (μ F) | | | | Code | (mm) |
| 16 | | 220 | 221 | 6.3x7.7 | 0.16 | 105 | |
| | | 220 | 221 | 8x10.2 | 0.20 | 180 | |
| | | 330 | 331 | 8x10.2 | 0.20 | 220 | |
| | | 330 | 331 | 10x10.2 | 0.20 | 260 | |
| | | 470 | 471 | 8x10.2 | 0.20 | 270 | |
| | | 470 | 471 | 10x10.2 | 0.20 | 340 | |
| | | 680 | 681 | 10x10.2 | 0.20 | 380 | |
| 25 | | 4.7 | 4R7 | 4x5.4 | 0.14 | 22 | |
| | | 10 | 100 | 4x5.4 | 0.14 | 22 | |
| | | 10 | 100 | 5x5.4 | 0.14 | 28 | |
| | | 22 | 220 | 5x5.4 | 0.14 | 35 | |
| | | 22 | 220 | 6.3x5.4 | 0.14 | 55 | |
| | | 22 | 220 | 5x5.4 | 0.14 | 45 | |
| | | 33 | 330 | 6.3x5.4 | 0.14 | 65 | |
| | | 47 | 470 | 6.3x5.4 | 0.14 | 71 | |
| | | 47 | 470 | 6.3x7.7 | 0.14 | 91 | |
| | | 100 | 101 | 6.3x7.7 | 0.14 | 95 | |
| | | 100 | 101 | 8x10.2 | 0.16 | 140 | |
| | | 220 | 221 | 8x10.2 | 0.16 | 200 | |
| | | 220 | 221 | 10x10.2 | 0.16 | 273 | |
| | | 330 | 331 | 8x10.2 | 0.16 | 250 | |
| | | 330 | 331 | 10x10.2 | 0.16 | 340 | |
| | | 470 | 471 | 10x10.2 | 0.16 | 360 | |
| | 35 | | 2.2 | 2R2 | 4x5.4 | 0.12 | 15 |
| | | | 3.3 | 3R3 | 4x5.4 | 0.12 | 18 |
| | | 4.7 | 4R7 | 4x5.4 | 0.12 | 22 | |
| | | 10 | 100 | 4x5.4 | 0.12 | 25 | |
| | | 10 | 100 | 5x5.4 | 0.12 | 30 | |
| | | 22 | 220 | 5x5.4 | 0.12 | 35 | |
| | | 22 | 220 | 6.3x5.4 | 0.12 | 60 | |
| | | 33 | 330 | 6.3x5.4 | 0.12 | 60 | |
| | | 33 | 330 | 6.3x7.7 | 0.12 | 84 | |
| | | 47 | 470 | 6.3X5.4 | 0.12 | 60 | |
| | | 47 | 470 | 6.3x7.7 | 0.12 | 84 | |
| | | 47 | 470 | 8X10.2 | 0.14 | 100 | |
| | | 100 | 101 | 6.3x7.7 | 0.14 | 105 | |
| | | 100 | 101 | 8X10.2 | 0.14 | 150 | |
| | | 220 | 221 | 8x10.2 | 0.14 | 220 | |
| | | 220 | 221 | 10x10.2 | 0.14 | 250 | |
| | | 330 | 331 | 10x10.2 | 0.14 | 300 | |

Note: Ripple Current measured at 120Hz, 105°C

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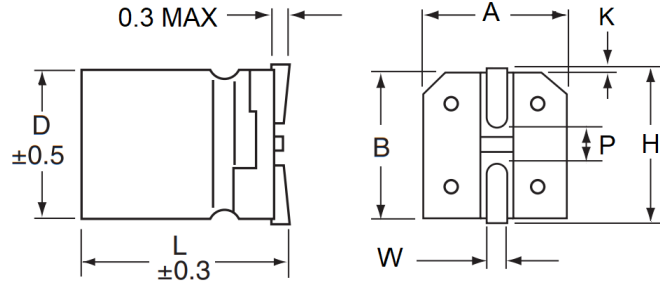
STANDARD RATING

| Rated Voltage (VDC) | Rated Capacitance | | Case Size (mm) | Tan δ (%) | Ripple Current (mA/rms) |
|------------------------|-------------------|------|-------------------|---------------------|----------------------------|
| | (μ F) | Code | | | |
| 50 | 1 | 1R0 | 4x5.4 | 0.12 | 10 |
| | 2.2 | 2R2 | 4x5.4 | 0.12 | 16 |
| | 3.3 | 3R3 | 4x5.4 | 0.12 | 16 |
| | 4.7 | 4R7 | 5x5.4 | 0.12 | 23 |
| | 10 | 100 | 6.3x5.4 | 0.12 | 35 |
| | 22 | 220 | 6.3x7.7 | 0.12 | 65 |
| | 33 | 330 | 6.3x7.7 | 0.12 | 70 |
| | 33 | 330 | 8x10.2 | 0.12 | 91 |
| | 47 | 470 | 6.3x7.7 | 0.12 | 75 |
| | 47 | 470 | 8x10.2 | 0.12 | 95 |
| | 100 | 101 | 8x10.2 | 0.12 | 110 |
| | 100 | 101 | 10x10.2 | 0.12 | 145 |
| | 220 | 221 | 10x10.2 | 0.12 | 210 |

| Rated Voltage (VDC) | Rated Capacitance | | Case Size (mm) | Tan δ (%) | Ripple Current (mA/rms) |
|------------------------|-------------------|------|-------------------|---------------------|----------------------------|
| | (μ F) | Code | | | |
| 63 | 4.7 | 4R7 | 6.3x5.4 | 0.18 | 20 |
| | 10 | 100 | 6.3x5.4 | 0.18 | 20 |
| | 22 | 220 | 8x10.2 | 0.18 | 30 |
| | 33 | 330 | 8x10.2 | 0.18 | 30 |
| | 47 | 470 | 8x10.2 | 0.18 | 45 |
| | 100 | 101 | 10x10.2 | 0.18 | 60 |
| | 100 | 3.3 | 3R3 | 8x10.2 | 0.18 |
| 4.7 | | 4R7 | 8x10.2 | 0.18 | 50 |
| 10 | | 100 | 8x10.2 | 0.18 | 55 |
| 22 | | 220 | 10x10.2 | 0.18 | 60 |
| 33 | | 330 | 10x10.2 | 0.18 | 65 |
| 47 | | 470 | 10x10.2 | 0.18 | 65 |

Note: Ripple Current measured at 120Hz, 105°C

DIMENSION



Unit : mm

| D | L | A ± 0.2 | B Max | H Max | W | P ± 0.2 | K |
|----------|------|-------------|-------|-------|----------------|-------------|-----------------|
| 4.0 (D) | 5.4 | 4.3 | 5.0 | 5.5 | 0.65 \pm 0.1 | 1.0 | 0.35+0.15/-0.2 |
| 5.0 (E) | 5.4 | 5.3 | 6.0 | 6.5 | 0.65 \pm 0.1 | 1.5 | 0.35+0.15/-0.2 |
| 6.3 (F) | 5.4 | 6.6 | 7.3 | 7.8 | 0.65 \pm 0.1 | 2.1 | 0.35+0.15/-0.2 |
| 6.3 (F) | 7.7 | 6.6 | 7.3 | 7.8 | 0.65 \pm 0.1 | 2.1 | 0.35+0.15/-0.2 |
| 8.0 (H) | 10.2 | 8.3 | 9.1 | 10.0 | 0.90 \pm 0.2 | 3.1 | 0.70 \pm 0.20 |
| 10.0 (J) | 10.2 | 10.3 | 11.1 | 12.0 | 0.90 \pm 0.2 | 4.6 | 0.70 \pm 0.20 |

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SHT series

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PART NUMBERING SYSTEM

SHT 2A 470M J102
(1) (2) (3) (4)

| No | Item | Code | Description | |
|-----|----------------|------|--|---|
| (1) | Meritek Series | SHT | Aluminum Electrolytic Capacitors, SMD type, 1000 Hrs 105°C | |
| (2) | Rated Voltage | 2A | 100VDC | DC Voltage Code, 0G to 2A |
| (3) | Capacitance | 470M | 47µF ±20% (M) | First two digit: significant, Third: Multiplier |
| (4) | Size Code | J102 | 10x10.2mm | DxL (mm) |

| Voltage | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | 500 |
|---------|----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 0G | 0J | 1A | 1C | 1E | 1V | 1H | 1J | 2A | 2C | 2D | 2E | 2V | 2G | 2W | 2H |

| Diameter | 4 | 5 | 6.3 | 8 | 10 | 12.5 | 14.5 | 16 | 18 | 20 | 22 | 25 |
|----------|---|---|-----|---|----|------|------|----|----|----|----|----|
| Code | D | E | F | H | J | K | U | L | M | N | P | Q |

LEGACY PART NUMBERING SYSTEM

SHT 100V 470M J102
(1) (2) (3) (4)

| No | (1) | (2) | (3) | (4) |
|------|----------------|---------------|-------------------|-----------|
| Item | Meritek Series | Rated Voltage | Rated Capacitance | Size Code |

*Specifications subject to change without notice.