



**THE DATASHEET OF
SH221M035ST**



Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

2000 Hour Long Life, Aluminum Electrolytic



Type SH is a radial leaded aluminum electrolytic capacitor with a +105 °C, 2000 hour long life rating. The SH is a high reliability product and is ideal for high quality applications that require long life in high temperatures environments.

Highlights

- +105 °C
- 2000 hours - long life
- High reliability
- Available in T&R and ammo pack

Specifications



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Capacitance Range: 1.0 to 4700 μF
Voltage Range: 6.3 to 450 Vdc
Capacitance Tolerance: $\pm 20\%$
Operating Temperature Range: $-40\text{ }^{\circ}\text{C}$ to $+105\text{ }^{\circ}\text{C}$ ($-25\text{ }^{\circ}\text{C}$ for 160 to 450 Vdc)
DC Leakage Current: After 2 minutes, $25\text{ }^{\circ}\text{C}$ at rated voltage
 6.3 to 100 Vdc
 $I = .01CV + 3\text{ }\mu\text{A Max}$
 $\geq 160\text{ Vdc}$ after voltage applied for 3 minutes
 $I = .03CV + 10\text{ }\mu\text{A Max}$
 C = Capacitance in (μF)
 V = Rated voltage
 I = Leakage current in μA

Dissipation Factor @ 120 Hz, +25 °C:

| WV (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160-250 | 400-450 |
|--------|-----|----|----|----|----|----|----|-----|---------|---------|
| DF(%) | 26 | 22 | 18 | 16 | 14 | 12 | 10 | 10 | 15 | 20 |

Above 1000 μF , the value of DF (%) is increased 2% for every additional 1000 μF

Ripple Multipliers for Frequency and Temperature:

| Rated WVDC | Ripple Multipliers | | | |
|------------|--------------------|-------|------|-------|
| | 60Hz | 120Hz | 1kHz | 10kHz |
| 6 to 25 | 0.80 | 1.0 | 1.1 | 1.2 |
| 35 to 100 | 0.75 | 1.0 | 1.3 | 1.4 |
| 160 to 450 | 0.70 | 1.0 | 1.4 | 1.6 |

| Ambient Temperature | Ripple Multiplier |
|---------------------|-------------------|
| +105 °C | 1.00 |
| +85 °C | 1.50 |
| +70 °C | 1.80 |

Load Life Test: Apply Rated WVDC for 2000 hours at +105 °C
 Capacitance change within 20% of initial value
 DF not to exceed 200% of initial requirement
 DC Leakage current meets initial limits

Shelf Life: 1000 hrs @105 °C with no voltage applied
 Cap change within 20% of initial value
 DF \leq 200% of initial requirements
 DC leakage current meets initial requirement

Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

Outline Drawing

Outline Dimensions (Millimeters)



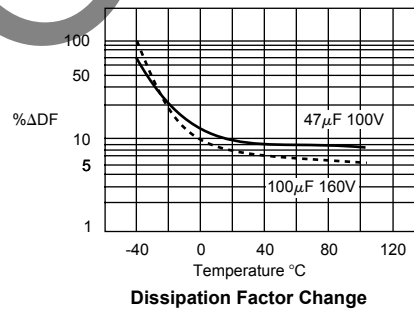
Case vented on diameters 6.3 and greater

Vinyl sleeve adds .5 Max. to diameter and 2.0 Max. to length

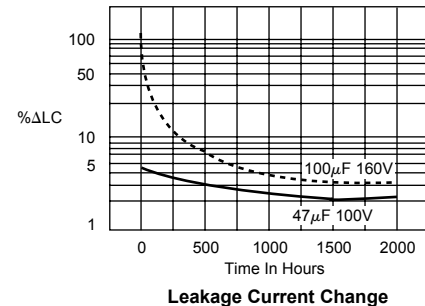
Part Numbering System



Temperature Characteristics



Load Life Characteristics



Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

Ratings

| Capacitance (uF) | Catalog Part Number | ESR 120 Hz/+25°C (ohms) | Max Ripple Current 120 Hz/ +105°C (ma) | Size in. (mm) | | | | | | | |
|--------------------------------|------------------------|----------------------------------|--|-----------------|--------|---------------|--------|-------------------|-------|------------------|-------|
| | | | | Diameter (D) | | Length (L) | | Lead Space (S) | | Lead dia. (d) | |
| 6.3 Vdc (8 Volts Surge) | | | | | | | | | | | |
| 47 | SH470M6R3ST | 7.34 | 65 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 100 | SH101M6R3ST | 3.45 | 100 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 220 | SH221M6R3ST | 1.57 | 165 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 330 | SH331M6R3ST | 1.04 | 200 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 470 | SH471M6R3ST | 0.73 | 280 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 1000 | SH102M6R3ST | 0.34 | 470 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 2200 | SH222M6R3ST | 0.17 | 930 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 3300 | SH332M6R3ST | 0.12 | 1100 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 4700 | SH472M6R3ST | 0.09 | 1320 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 10 Vdc (13 Volts Surge) | | | | | | | | | | | |
| 47 | SH470M010ST | 6.21 | 75 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 100 | SH101M010ST | 2.92 | 110 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 220 | SH221M010ST | 1.33 | 180 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 330 | SH331M010ST | 0.88 | 255 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 470 | SH471M010ST | 0.62 | 305 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 1000 | SH102M010ST | 0.29 | 570 | 0.394 | (10.0) | 0.630 | (16.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 2200 | SH222M010ST | 0.14 | 1010 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 3300 | SH332M010ST | 0.10 | 1220 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 4700 | SH472M010ST | 0.08 | 1410 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 16 Vdc (20 Volts Surge) | | | | | | | | | | | |
| 33 | SH330M016ST | 7.23 | 70 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 47 | SH470M016ST | 5.08 | 85 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 100 | SH101M016ST | 2.39 | 135 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 220 | SH221M016ST | 1.09 | 235 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 330 | SH331M016ST | 0.72 | 285 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 470 | SH471M016ST | 0.51 | 395 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 1000 | SH102M016ST | 0.24 | 700 | 0.394 | (10.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 2200 | SH222M016ST | 0.12 | 1150 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 3300 | SH332M016ST | 0.09 | 1350 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 4700 | SH472M016ST | 0.07 | 1560 | 0.630 | (16.0) | 1.26 | (32.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 25 Vdc (32 Volts Surge) | | | | | | | | | | | |
| 10 | SH100M025ST | 21.22 | 39 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 22 | SH220M025ST | 9.65 | 60 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 33 | SH330M025ST | 6.43 | 75 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 47 | SH470M025ST | 4.52 | 90 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 100 | SH101M025ST | 2.12 | 145 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 220 | SH221M025ST | 0.96 | 250 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 330 | SH331M025ST | 0.64 | 355 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 470 | SH471M025ST | 0.45 | 470 | 0.394 | (10.0) | 0.630 | (16.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 1000 | SH102M025ST | 0.21 | 855 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 2200 | SH222M025ST | 0.11 | 1230 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 3300 | SH332M025ST | 0.08 | 1450 | 0.630 | (16.0) | 1.26 | (32.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 4700 | SH472M025ST | 0.06 | 1690 | 0.709 | (18.0) | 1.40 | (36.0) | 0.295 | (7.5) | 0.031 | (0.8) |

Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

Ratings

| Capacitance (uF) | Catalog Part Number | ESR 120 Hz/+25°C (ohms) | Max Ripple Current 120 Hz/+105°C (ma) | Size in. (mm) | | | | | | | |
|----------------------------------|---------------------|-------------------------|---------------------------------------|---------------|--------|------------|--------|----------------|-------|---------------|-------|
| | | | | Diameter (D) | | Length (L) | | Lead Space (S) | | Lead dia. (d) | |
| 35 Vdc (44 Volts Surge) | | | | | | | | | | | |
| 10 | SH100M035ST | 18.57 | 40 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 22 | SH220M035ST | 8.44 | 65 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 33 | SH330M035ST | 5.63 | 85 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 47 | SH470M035ST | 3.95 | 115 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 100 | SH101M035ST | 1.86 | 190 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 220 | SH221M035ST | 0.84 | 315 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 330 | SH331M035ST | 0.56 | 440 | 0.394 | (10.0) | 0.630 | (16.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 470 | SH471M035ST | 0.40 | 580 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 1000 | SH102M035ST | 0.19 | 995 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 2200 | SH222M035ST | 0.10 | 1450 | 0.630 | (16.0) | 1.26 | (32.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 3300 | SH332M035ST | 0.07 | 1660 | 0.709 | (18.0) | 1.40 | (36.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 50 Vdc (63 Volts Surge) | | | | | | | | | | | |
| 1 | SH010M050ST | 159.15 | 12 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 2.2 | SH2R2M050ST | 72.34 | 18 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 3.3 | SH3R3M050ST | 48.23 | 25 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 4.7 | SH4R7M050ST | 33.86 | 30 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 10 | SH100M050ST | 15.92 | 50 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 22 | SH220M050ST | 7.23 | 75 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 33 | SH330M050ST | 4.82 | 105 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 47 | SH470M050ST | 3.39 | 125 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 100 | SH101M050ST | 1.59 | 210 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 220 | SH221M050ST | 0.72 | 400 | 0.394 | (10.0) | 0.630 | (16.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 330 | SH331M050ST | 0.48 | 535 | 0.394 | (10.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 470 | SH471M050ST | 0.34 | 730 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 1000 | SH102M050ST | 0.16 | 1110 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 2200 | SH222M050ST | 0.08 | 1530 | 0.709 | (18.0) | 1.40 | (36.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 63 Vdc (79 Volts Surge) | | | | | | | | | | | |
| 4.7 | SH4R7M063ST | 28.22 | 34 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 10 | SH100M063ST | 13.26 | 55 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 22 | SH220M063ST | 6.03 | 90 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 33 | SH330M063ST | 4.02 | 110 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 47 | SH470M063ST | 2.82 | 155 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 100 | SH101M063ST | 1.33 | 260 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 220 | SH221M063ST | 0.60 | 460 | 0.394 | (10.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 330 | SH331M063ST | 0.40 | 650 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 470 | SH471M063ST | 0.28 | 800 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 1000 | SH102M063ST | 0.13 | 1200 | 0.630 | (16.0) | 1.26 | (32.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 100 Vdc (125 Volts Surge) | | | | | | | | | | | |
| 1 | SH010M100ST | 132.63 | 15 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 2.2 | SH2R2M100ST | 60.29 | 22 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 3.3 | SH3R3M100ST | 40.19 | 29 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 4.7 | SH4R7M100ST | 28.22 | 37 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 10 | SH100M100ST | 13.26 | 65 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 22 | SH220M100ST | 6.03 | 115 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |

Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

Ratings

| Capacitance (uF) | Catalog Part Number | ESR 120 Hz/+25°C (ohms) | Max Ripple Current 120 Hz/ +105°C (ma) | Size in. (mm) | | | | | | | |
|-----------------------------------|------------------------|----------------------------------|--|-----------------|--------|---------------|--------|-------------------|-------|------------------|-------|
| | | | | Diameter (D) | | Length (L) | | Lead Space (S) | | Lead dia. (d) | |
| 100 Vdc (125 Volts Surge) | | | | | | | | | | | |
| 33 | SH330M100ST | 4.02 | 160 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 47 | SH470M100ST | 2.82 | 210 | 0.394 | (10.0) | 0.630 | (16.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 100 | SH101M100ST | 1.33 | 385 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 220 | SH221M100ST | 0.60 | 590 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 330 | SH331M100ST | 0.40 | 720 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 470 | SH471M100ST | 0.28 | 875 | 0.630 | (16.0) | 1.26 | (32.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| *160 Vdc (200 Volts Surge) | | | | | | | | | | | |
| 1 | SH010M160ST | 198.94 | 17 | 0.197 | (5.0) | 0.433 | (11.0) | 0.079 | (2.0) | 0.020 | (0.5) |
| 2.2 | SH2R2M160ST | 90.43 | 25 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 3.3 | SH3R3M160ST | 60.29 | 36 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 4.7 | SH4R7M160ST | 42.33 | 43 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 10 | SH100M160ST | 19.89 | 70 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 22 | SH220M160ST | 9.04 | 130 | 0.394 | (10.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 33 | SH330M160ST | 6.03 | 180 | 0.512 | (13.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 47 | SH470M160ST | 4.23 | 270 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 100 | SH101M160ST | 1.99 | 330 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| *200 Vdc (250 Volts Surge) | | | | | | | | | | | |
| 1 | SH010M200ST | 198.94 | 17 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 2.2 | SH2R2M200ST | 90.43 | 25 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 3.3 | SH3R3M200ST | 60.29 | 36 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 4.7 | SH4R7M200ST | 42.33 | 50 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 10 | SH100M200ST | 19.89 | 80 | 0.394 | (10.0) | 0.630 | (16.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 22 | SH220M200ST | 9.04 | 140 | 0.394 | (10.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 33 | SH330M200ST | 6.03 | 190 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 47 | SH470M200ST | 4.23 | 220 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 100 | SH101M200ST | 1.99 | 335 | 0.630 | (16.0) | 1.26 | (32.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| *250 Vdc (300 Volts Surge) | | | | | | | | | | | |
| 1 | SH010M250ST | 198.94 | 17 | 0.248 | (6.3) | 0.433 | (11.0) | 0.098 | (2.5) | 0.020 | (0.5) |
| 2.2 | SH2R2M250ST | 90.43 | 29 | 0.315 | (8.0) | 0.433 | (11.0) | 0.138 | (3.5) | 0.024 | (0.6) |
| 3.3 | SH3R3M250ST | 60.29 | 42 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 4.7 | SH4R7M250ST | 42.33 | 50 | 0.394 | (10.0) | 0.492 | (12.5) | 0.197 | (5.0) | 0.024 | (0.6) |
| 10 | SH100M250ST | 19.89 | 88 | 0.394 | (10.0) | 0.787 | (20.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 22 | SH220M250ST | 9.04 | 155 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 33 | SH330M250ST | 6.03 | 190 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |
| 47 | SH470M250ST | 4.23 | 230 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| 100 | SH101M250ST | 1.99 | 340 | 0.709 | (18.0) | 1.40 | (36.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| *400 Vdc (450 Volts Surge) | | | | | | | | | | | |
| 22 | SH220M400ST | 12.06 | 110 | 0.630 | (16.0) | 0.984 | (25.0) | 0.295 | (7.5) | 0.031 | (0.8) |
| *450 Vdc (500 Volts Surge) | | | | | | | | | | | |
| 10 | SH100M450ST | 26.53 | 80 | 0.512 | (13.0) | 0.984 | (25.0) | 0.197 | (5.0) | 0.024 | (0.6) |

* Over 160 Vdc the ripple is measured at 85 °C

Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

Taping & Packaging

Fig. 1 - Formed Taping



Fig. 2 - Straight Taping (5φ, 6.3φ, 8φ)



Fig. 3- Straight Taping (Under 10φ, 12φ, 13φ)



Fig. 4- Straight Taping (16φ, 18φ)



Standard Lead Spacing of Taped Components is 5mm
Other Lead Spacing is Available by Special Order

| Code | D | A | d | P | P ₀ | P ₁ | P ₂ | F | W | W ₀ | H | H ₀ | D ₀ | t | ih | Fig. |
|------------------|------------|------------|--------------|-------------|----------------|----------------|----------------|----------------------|-------------|----------------|--------------|----------------|----------------|-------------|-------------|------|
| Tolerance | 0.5 | 1.0 | ±0.05 | ±1.0 | ±0.2 | ±0.7 | ±1.3 | +0.8 -0.2 | ±0.5 | Min. | ±0.75 | ±0.5 | ±0.2 | ±0.2 | Max. | |
| Item | 4 ~ 6.3 | 7.0 | 0.45 | 12.7 | 12.7 | 3.85 | 6.35 | 5.0 | 18.0 | 12.5 | 18.5 | 16.0 | 4.0 | 0.7 | 2.0 | 1 |
| | 5 ~ 8 | 12.5 | 0.5 | 12.7 | 12.7 | 3.85 | 6.35 | 5.0 | 18.0 | 12.5 | 18.5 | 16.0 | 4.0 | 0.7 | 2.0 | |
| | 5, 6.3 | 12.5 | 0.5 | 12.7 | 12.7 | 5.1 | 6.35 | 2.5 | 18.0 | 12.5 | 18.5 | — | 4.0 | 0.7 | 2.0 | 2 |
| | 8 | 12.5 | 0.5 | 12.7 | 12.7 | 4.6 | 6.35 | 3.5 | 18.0 | 12.5 | 18.5 | — | 4.0 | 0.7 | 2.0 | |
| | 10 | 21.0 | 0.6 | 12.7 | 12.7 | 3.85 | 6.35 | 5.0 | 18.0 | 12.5 | 18.5 | — | 4.0 | 0.7 | 2.0 | 3 |
| 12, 13 | 26.0 | 0.6 | 15.0 | 15.0 | 5.0 | 7.5 | 5.0 | 18.0 | 12.5 | 18.5 | — | 4.0 | 0.7 | 2.0 | | |
| 16, 18 | 26.0 | 0.8 | 30.0 | 15.0 | 3.75 | 7.5 | 7.5 | 7.5 | 18.0 | 12.5 | 18.0 | — | 4.0 | 0.7 | 2.0 | 4 |

| Capacitor Diameter D (mm) | Ammo Pack Box Dimensions (mm) | | | Quantity Per Ammo Pack Box |
|---------------------------|-------------------------------|-------|-----|----------------------------|
| | A±5 | B Max | C±3 | |
| 4 | 250 | 340 | 54 | 3000 |
| 5 | 250 | 340 | 54 | 2,000 |
| 6.3 | 290 | 340 | 54 | 2,000 |
| 8 | 250 | 340 | 54 | 1,000 |
| 10 (12L) | 290 | 340 | 54 | 600 |
| 10 (16L) | 350 | 340 | 59 | 600 |
| 10 (20L) | 340 | 340 | 71 | 600 |
| 12, 13 | 340 | 340 | 71 | 400 |
| 16 | 340 | 340 | 71 | 300 |



| Tape And Reel Quantities | | |
|--------------------------|------------|------------------|
| Case Diameter D (mm) | Reel Width | Reel Qty. (Pcs.) |
| 4 | 44 | 1500 |
| 5 | 44 | 1200 |
| 6 | 44 | 1000 |
| 8 | 44 | 800 |
| 10 (12L) | 44 | 600 |
| 10 (16L) | 50 | 600 |
| 12, 13 | - | - |
| 16 | - | - |

Type SH 105 °C Radial Leaded Aluminum Electrolytic Capacitors

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