



Metallized Polyester Film Capacitors

Radial Leaded, Epoxy Dipped

FEATURES

Small Size - Self Healing - Low Cost

APPLICATIONS

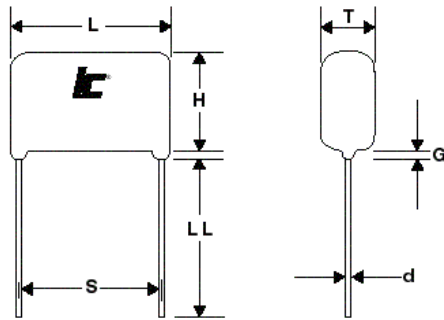
General Purpose - Bypass - Coupling - Blocking

| | | | | | | |
|---|---|------------------------|--|------------------------------|------------|-------------|
| Operating Temperature Range | -55°C to +125°C | | | | | |
| Capacitance Tolerance | $\pm 10\%$ at 1 kHz, 25°C $\pm 5\%$ optional | | | | | |
| Peak, AC voltage (50/60 Hz) | WVDC | 100 | 250 | 400 | 630 | 1000 |
| | VAC | 63 | 160 | 200 | 220 | 250 |
| For T>+85°C , The voltage must be decreased by 1.25% per °C | | | | | | |
| Dissipation Factor (MAX) 25°C | Frequency (kHz) | | Dissipation Factor | | | |
| | 1 | | 1.0% | | | |
| | 10 | | 1.5% | | | |
| Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied | WVDC | Capacitance | | Insulation Resistance | | |
| | ≤ 100 | $\leq 0.33\mu\text{F}$ | | 15000 MΩ | | |
| | > 100 | $> 0.33\mu\text{F}$ | | 30000 MΩxμF | | |
| | ≤ 100 | $\leq 0.33\mu\text{F}$ | | 5000 MΩxμF | | |
| | > 100 | $> 0.33\mu\text{F}$ | | 10000 MΩxμF | | |
| Load Life | 2000 Hours, +85C with 125% of rated voltage | | | | | |
| | Capacitance Change | | $\leq 5\%$ of initially measured value | | | |
| | Dissipation Factor | | ≤ 0.005 at 1kHz and 25°C | | | |
| | Insulation Resistance | | $\geq 50\%$ of maximum specified value | | | |
| Damp Heat test | 1000 Hours, 93%RH(+/-2%), +40°C and no voltage applied | | | | | |
| | Capacitance Change | | $\leq 5\%$ of initially measured value | | | |
| | Dissipation Factor | | ≤ 0.005 at 1kHz and 25°C | | | |
| | Insulation Resistance | | $\geq 50\%$ of maximum specified value | | | |
| Self Inductance | < 1 nano-Henry per mm of body length and lead length | | | | | |
| Capacitance Drift Factor | $< 1.0\%$ after 2 years at 40°C | | | | | |
| Capacitance Temperature Coefficient | +400 ppm/°C, ± 200 ppm/°C | | | | | |
| Dielectric Strength | Terminal to Terminal | | | | | |
| | 160% of VDC applied for 2 Seconds and 25°C | | | | | |
| Dielectric Construction | Polyester Metallized film | | | | | |
| Coating | Flame Retardant epoxy resin (UL94V0) | | | | | |
| Leads | Lead free tinned copper leads | | | | | |

MSR

Metallized Polyester Film Capacitors

Radial Leaded, Epoxy Dipped



| | | | | | |
|---------|------|-----|------|------|------|
| L MAX | 10.5 | 12 | 18.5 | 26 | 31 |
| S+1.0 | 7.5 | 10 | 15 | 22.5 | 27.5 |
| G MAX | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| d +0.05 | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 |

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MSR

Metallized Polyester Epoxy
Dipped Radial lead

| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μ sec.) | Dims LxHxT (mm) | S (MM) | d (MM) |
|------------------|------|----------------|------------------|-----------------|--------|--------|
| 0.01 | 400 | 103MSR400K | 160 | 10.5x9x5.5 | 7.5 | 0.6 |
| 0.01 | 630 | 103MSR630K | 200 | 13x10x6 | 10 | 0.6 |
| 0.01 | 1000 | 103MSR102K | 80 | 14x11.5x7 | 10 | 0.6 |
| 0.015 | 250 | 153MSR250K | 110 | 10.5x9.5x5.5 | 7.5 | 0.6 |
| 0.015 | 400 | 153MSR400K | 160 | 10.5x9.5x5.5 | 7.5 | 0.6 |
| 0.015 | 630 | 153MSR630K | 200 | 13x10.5x6.5 | 10 | 0.6 |
| 0.015 | 1000 | 153MSR102K | 80 | 14x11.5x8 | 10 | 0.6 |
| 0.022 | 250 | 223MSR250K | 110 | 10.5x9.5x5.5 | 7.5 | 0.6 |
| 0.022 | 400 | 223MSR400K | 160 | 13x9.5x6 | 10 | 0.6 |
| 0.022 | 630 | 223MSR630K | 200 | 13x12.5x7.5 | 10 | 0.6 |
| 0.022 | 1000 | 223MSR102K | 40 | 19x12.5x8.5 | 15 | 0.8 |
| 0.033 | 250 | 333MSR250K | 110 | 10.5x9.5x6 | 7.5 | 0.6 |
| 0.033 | 400 | 333MSR400K | 160 | 13x10.5x6.5 | 10 | 0.6 |
| 0.033 | 630 | 333MSR630K | 90 | 18.5x12x6.5 | 15 | 0.8 |
| 0.033 | 1000 | 333MSR102K | 40 | 19.5x14x9.5 | 15 | 0.8 |
| 0.047 | 100 | 473MSR100K | 35 | 10.5x9.5x6 | 7.5 | 0.6 |
| 0.047 | 250 | 473MSR250K | 110 | 12.5x9x5 | 10 | 0.6 |
| 0.047 | 400 | 473MSR400K | 160 | 13x11x7 | 10 | 0.6 |
| 0.047 | 630 | 473MSR630K | 90 | 18x12.5x7.5 | 15 | 0.6 |
| 0.047 | 1000 | 473MSR102K | 33 | 27x14x9 | 22.5 | 0.8 |
| 0.068 | 100 | 683MSR100K | 35 | 10.5x9.5x6 | 7.5 | 0.6 |
| 0.068 | 250 | 683MSR250K | 110 | 12.5x10x5 | 10 | 0.6 |
| 0.068 | 400 | 683MSR400K | 65 | 17.5x10x5.5 | 15 | 0.8 |
| 0.068 | 630 | 683MSR630K | 90 | 18.5x14x8.5 | 15 | 0.8 |
| 0.068 | 1000 | 683MSR102K | 33 | 27x15x10 | 22.5 | 0.8 |
| 0.1 | 100 | 104MSR100K | 30 | 12.5x8.5x5.5 | 10 | 0.6 |
| 0.1 | 250 | 104MSR250K | 110 | 13x10x6.5 | 10 | 0.6 |
| 0.1 | 400 | 104MSR400K | 65 | 18.5x12x7 | 15 | 0.8 |
| 0.1 | 630 | 104MSR630K | 90 | 18.5x15.5x10 | 15 | 0.8 |
| 0.1 | 1000 | 104MSR102K | 33 | 27x16.5x11.5 | 22.5 | 0.8 |
| 0.15 | 100 | 154MSR100K | 30 | 13x9x5.5 | 10 | 0.6 |
| 0.15 | 250 | 154MSR250K | 110 | 13x13x7 | 10 | 0.6 |

| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μ sec.) | Dims LxHxT (mm) | S (MM) | d (MM) |
|------------------|------|----------------|------------------|-----------------|--------|--------|
| 0.15 | 400 | 154MSR400K | 65 | 18.5x13.5x8 | 15 | 0.8 |
| 0.15 | 630 | 154MSR630K | 35 | 22.5x16.5x9.5 | 20 | 0.8 |
| 0.22 | 100 | 224MSR100K | 30 | 13x10x6.5 | 10 | 0.6 |
| 0.22 | 250 | 224MSR250K | 45 | 18x11.5x6 | 15 | 0.8 |
| 0.22 | 400 | 224MSR400K | 30 | 22.5x14.5x8 | 20 | 0.8 |
| 0.22 | 630 | 224MSR630K | 35 | 22.5x19x11.5 | 20 | 0.8 |
| 0.22 | 1000 | 224MSR102K | 20 | 32.5x22.5x14.5 | 27.5 | 0.8 |
| 0.33 | 100 | 334MSR100K | 20 | 17.5x10x5.5 | 15 | 0.8 |
| 0.33 | 250 | 334MSR250K | 45 | 18.5x12x7 | 15 | 0.8 |
| 0.33 | 400 | 334MSR400K | 30 | 22.5x15x9 | 20 | 0.8 |
| 0.33 | 630 | 334MSR630K | 30 | 32x19x12 | 27.5 | 0.8 |
| 0.33 | 1000 | 334MSR102K | 20 | 32.5x25.5x16 | 27.5 | 0.8 |
| 0.47 | 100 | 474MSR100K | 20 | 18x11x7 | 15 | 0.6 |
| 0.47 | 250 | 474MSR250K | 20 | 22.5x12.5x7.5 | 20 | 0.8 |
| 0.47 | 400 | 474MSR400K | 30 | 23.5x19x10.5 | 20 | 0.8 |
| 0.47 | 630 | 474MSR630K | 30 | 32x22x13.5 | 27.5 | 0.8 |
| 0.47 | 1000 | 474MSR102K | 20 | 32.5x26.5x18.5 | 27.5 | 0.8 |
| 0.68 | 100 | 684MSR100K | 20 | 18.5x12.5x7.5 | 15 | 0.6 |
| 0.68 | 250 | 684MSR250K | 20 | 22.5x13.5x8.5 | 20 | 0.8 |
| 0.68 | 400 | 684MSR400K | 25 | 32x19x12 | 27.5 | 0.8 |
| 0.68 | 630 | 684MSR630K | 30 | 33x24.5x14 | 27.5 | 0.8 |
| 1 | 100 | 105MSR100K | 20 | 18.5x13.5x8.5 | 15 | 0.8 |
| 1 | 250 | 105MSR250K | 20 | 22.5x15x10 | 20 | 0.8 |
| 1 | 400 | 105MSR400K | 25 | 30.5x21x12.5 | 27.5 | 0.8 |
| 1.5 | 100 | 155MSR100K | 10 | 22.5x14.5x8 | 20 | 0.8 |
| 1.5 | 250 | 155MSR250K | 15 | 30x17.5x9.5 | 27.5 | 0.8 |
| 2.2 | 100 | 225MSR100K | 10 | 22.5x16.5x10 | 20 | 0.8 |
| 2.2 | 250 | 225MSR250K | 15 | 30.5x22x12 | 27.5 | 0.8 |
| 3.3 | 100 | 335MSR100K | 10 | 22.5x20x12 | 20 | 0.8 |
| 4.7 | 100 | 475MSR100K | 5 | 30x20.5x11 | 27.5 | 0.8 |
| 6.8 | 100 | 685MSR100K | 5 | 32x23.5x14.5 | 27.5 | 0.8 |
| 10 | 100 | 106MSR100K | 5 | 32x28.5x17.5 | 27.5 | 0.8 |