

PMC

Metallized Polypropylene Film Capacitors for Switching Circuits



- Switching capacitor for industrial controls
- Motor Speed Controls
- SMPS
- Resonant circuit
- Induction Heaters
- High frequency
- High current

| | | | | | | |
|--|------|---|---------|----------------|----------|------|
| Operating Temperature Range | | -40°C to +85°C | | | | |
| Capacitance Tolerance | | +/- 10% at 1kHz, 20°C | | | | |
| Rated Voltage | VDC | 250 | 330 | 400 | 600 | 700 |
| | SVDC | 400 | 500 | 600 | 800 | 1000 |
| | VAC | 160 | 200 | 250 | 330 | 400 |
| Dissipation Factor (max) at 20°C. | | Freq (kHz) | C ≤ 5µF | 5µF < C ≤ 25µF | C > 25µF | |
| | | 1 | .05% | .08% | .1% | |
| Insulation Resistance @20°C (<70% RH) for 1 minute at 100VDC | | >30,000MΩ x µF not to exceed 30,000MΩ | | | | |
| Peak Current - I _{peak} (Non-repetitive) | | I _{peak} = 1.5°C*dv/dt Maximum | | | | |
| Dielectric Strength | | 200% of rated VDC for 10 seconds at 20°C between leads, 3KV at 60Hz for 60 seconds between leads and case. | | | | |
| Self inductance | | <1nH/mm along capacitor pitch. | | | | |
| Capacitance drift | | <1.0% up to 40°C after 2 years | | | | |
| Temperature Coefficient | | -200ppm/°C +/- 100ppm/°C | | | | |
| Life Expectancy Capacitance change (typical) -5% | | ≥ 30,000 hours @VAC at 70°C ≥100,000 hours @ WVDC at 70°C | | | | |
| Failure rate | | 300/billion component hours | | | | |
| Dielectric | | Polypropylene | | | | |
| Electrodes | | Vacuum deposited metal layers | | | | |
| Construction | | Metallized film | | | | |
| Leads | | Copper leads. | | | | |
| Coating | | Solvent resistant plastic box (UL 94V-1) with epoxy end fills (UL 94V-0) | | | | |

PHYSICAL DIMENSIONS

| μF | WVDC (VAC) | 250 (160) | 330 (200) | 400 (250) | 600 (330) | 700 (400) |
|------|------------|----------------|----------------|----------------|----------------|----------------|
| 1.5 | | | | | | 42.5x27.5x24.5 |
| 2 | | | | | | 42.5x27.5x24.5 |
| 2.5 | | | | | 42.5x27.5x24.5 | 42.5x35.5x33.5 |
| 3 | | | | | 42.5x27.5x24.5 | 42.5x35.5x33.5 |
| 3.3 | | | | | 42.5x27.5x24.5 | 42.5x35.5x33.5 |
| 4 | | | | 42.5x27.5x24.5 | 42.5x35.5x33.5 | 42.5x45x33 |
| 4.7 | | | | | 42.5x35.5x33.5 | 42.5x45x33 |
| 5 | | | | 42.5x27.5x24.5 | 42.5x35.5x33.5 | 42.5x45x33 |
| 6.8 | | | 42.5x27.5x24.5 | 42.5x35.5x33.5 | 42.5x45x33 | 57.5x45x30 |
| 8 | | | | | | 57.5x50x35 |
| 9 | | | | | 42.5x45x33 | 57.5x50x35 |
| 10 | | 42.5x27.5x24.5 | | 42.5x35.5x33.5 | 57.5x45x30 | |
| 12.5 | | | | 42.5x45x33 | 57.5x50x35 | |
| 15 | | 42.5x35.5x33.5 | 42.5x35.5x33.5 | 42.5x45x33 | 57.5x50x35 | |
| 20 | | 42.5x35.5x33.5 | 42.5x45x33 | 57.5x45x30 | | |
| 22 | | 42.5x35.5x33.5 | 42.5x45x33 | 57.5x50x35 | | |
| 25 | | 42.5x35.5x33.5 | 57.5x45x30 | 57.5x50x35 | | |
| 30 | | 42.5x45x33 | 57.5x45x30 | | | |
| 33 | | 42.5x45x33 | | | | |
| 35 | | 42.5x45x33 | 57.5x50x35 | | | |
| 40 | | | 57.5x50x35 | | | |
| 50 | | 57.5x50x35 | | | | |
| 60 | | 57.5x50x35 | | | | |

Convert to inches, divide by 25.4

LxHxT (mm)

STANDARD PART LISTING

| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μs) | Maximum RMS Ripple Current @100kHz, +70°C | Typical ESR mΩ 100kHz, +25°C | Dimensions LxHxT (mm) |
|------------------|------|----------------|--------------|---|------------------------------|-----------------------|
| 1.5 | 700 | 155PMC700K#P2 | 70 | 12 | 5.3 | 42.5x27.5x24.5 |
| 2 | 700 | 205PMC700K#P2 | 70 | 16 | 3.8 | 42.5x27.5x24.5 |
| 2.5 | 600 | 255PMC600K#P2 | 55 | 16 | 3.8 | 42.5x27.5x24.5 |
| 2.5 | 700 | 255PMC700K#P1 | 70 | 20.5 | 3.3 | 42.5x35.5x33.5 |
| 3 | 600 | 305PMC600K#P2 | 55 | 17 | 3.4 | 42.5x27.5x24.5 |
| 3 | 700 | 305PMC700K#P1 | 70 | 21.5 | 3 | 42.5x35.5x33.5 |
| 3.3 | 600 | 335PMC600K# | 55 | 17 | 3.3 | 42.5x27.5x24.5 |
| 3.3 | 700 | 335PMC700K# | 70 | 22 | 2.9 | 42.5x35.5x33.5 |
| 4 | 400 | 405PMC400K#P2 | 40 | 17 | 3.2 | 42.5x27.5x24.5 |
| 4 | 600 | 405PMC600K#P1 | 55 | 23 | 2.6 | 42.5x35.5x33.5 |
| 4 | 700 | 405PMC700K#P0 | 70 | 25.5 | 2.5 | 42.5x45x33 |
| 4.7 | 600 | 475PMC600K# | 55 | 24 | 2.4 | 42.5x35.5x33.5 |
| 4.7 | 700 | 475PMC700K# | 70 | 27 | 2.2 | 42.5x45x33 |
| 5 | 400 | 505PMC400K#P2 | 40 | 18.5 | 2.8 | 42.5x27.5x24.5 |
| 5 | 600 | 505PMC600K#P1 | 55 | 24 | 2.4 | 42.5x35.5x33.5 |
| 5 | 700 | 505PMC700K#P0 | 70 | 27 | 2.2 | 42.5x45x33 |
| 6.8 | 330 | 685PMC330K# | 30 | 18.5 | 2.8 | 42.5x27.5x24.5 |
| 6.8 | 400 | 685PMC400K#P1 | 40 | 23.5 | 2.4 | 42.5x35.5x33.5 |
| 6.8 | 600 | 685PMC600K#P0 | 55 | 27.5 | 2.1 | 42.5x45x33 |
| 8 | 700 | 805PMC700K# | 40 | 25.5 | 3.5 | 57.5x50x35 |
| 9 | 600 | 905PMC600K#P0 | 55 | 3.0 | 1.8 | 42.5x45x33 |
| 9 | 700 | 905PMC700K# | 40 | 26.5 | 3.2 | 57.5x50x35 |
| 10 | 250 | 106PMC250K#P2 | 25 | 19 | 2.6 | 42.5x27.5x24.5 |
| 10 | 400 | 106PMC400K#P1 | 40 | 25.5 | 2 | 42.5x35.5x33.5 |

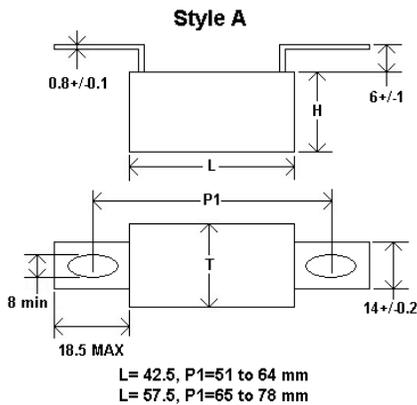
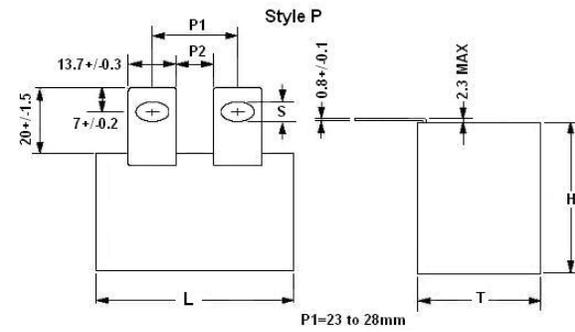
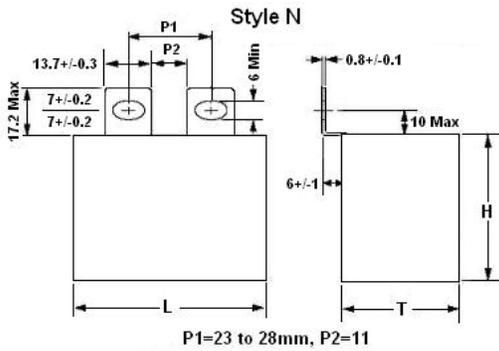
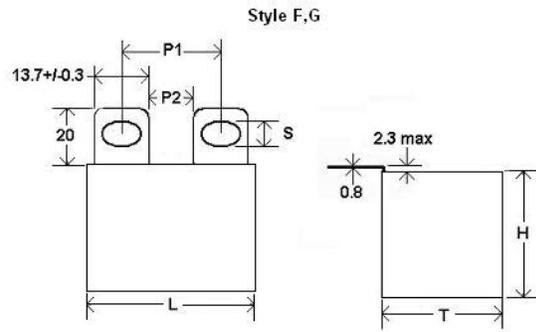
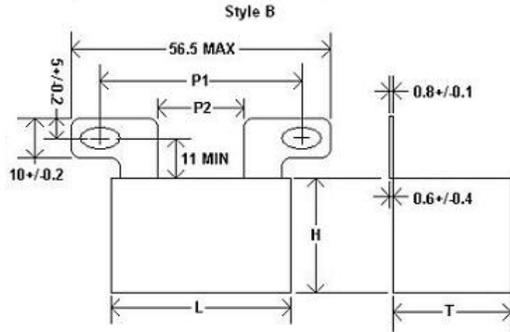
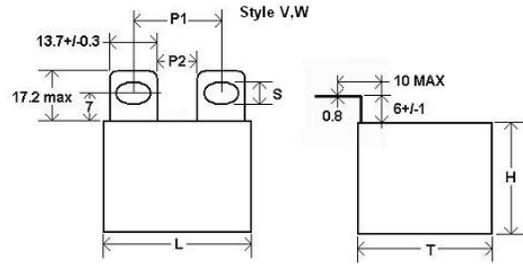
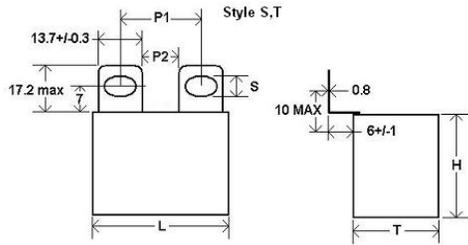
| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μs) | Maximum RMS Ripple Current @100kHz, +70°C | Typical ESR mΩ 100kHz, +25°C | Dimensions LxHxT (mm) |
|------------------|------|----------------|--------------|---|------------------------------|-----------------------|
| 10 | 600 | 106PMC600K# | 30 | 23.5 | 3.8 | 57.5x45x30 |
| 12.5 | 400 | 126PMC400K#P0 | 40 | 29 | 1.9 | 42.5x45x33 |
| 12.5 | 600 | 126PMC600K# | 30 | 26 | 3.3 | 57.5x50x35 |
| 15 | 250 | 156PMC250K#P1 | 25 | 24.5 | 2.2 | 42.5x35.5x33.5 |
| 15 | 330 | 156PMC330K# | 30 | 26.5 | 2 | 42.5x35.5x33.5 |
| 15 | 400 | 156PMC400K#P0 | 40 | 30 | 1.8 | 42.5x45x33 |
| 15 | 600 | 156PMC600K# | 30 | 27.5 | 3 | 57.5x50x35 |
| 20 | 250 | 206PMC250K#P1 | 25 | 27 | 1.9 | 42.5x35.5x33.5 |
| 20 | 330 | 206PMC330K# | 30 | 29.5 | 1.8 | 42.5x45x33 |
| 20 | 400 | 206PMC400K# | 20 | 26.5 | 2.8 | 57.5x45x30 |
| 22 | 250 | 226PMC250K# | 25 | 27.5 | 1.9 | 42.5x35.5x33.5 |
| 22 | 330 | 226PMC330K# | 30 | 30.5 | 1.7 | 42.5x45x33 |
| 22 | 400 | 226PMC400K# | 20 | 29 | 2.7 | 57.5x50x35 |
| 25 | 250 | 256PMC250K#P1 | 25 | 28 | 1.8 | 42.5x35.5x33.5 |
| 25 | 330 | 256PMC330K# | 17 | 26.5 | 2.7 | 57.5x45x30 |
| 25 | 400 | 256PMC400K# | 20 | 30 | 2.5 | 57.5x50x35 |
| 30 | 250 | 306PMC250K#P0 | 25 | 30 | 1.7 | 42.5x45x33 |
| 30 | 330 | 306PMC330K# | 17 | 27.5 | 2.6 | 57.5x45x30 |
| 33 | 250 | 336PMC250K# | 25 | 31 | 1.7 | 42.5x45x33 |
| 35 | 250 | 356PMC250K#P0 | 25 | 31 | 1.7 | 42.5x45x33 |
| 35 | 330 | 356PMC330K# | 17 | 31 | 2.3 | 57.5x50x35 |
| 40 | 330 | 406PMC330K# | 17 | 32.5 | 2.1 | 57.5x50x35 |
| 50 | 250 | 506PMC250K# | 15 | 33 | 2.1 | 57.5x50x35 |
| 60 | 250 | 606PMC250K# | 15 | 34.5 | 1.9 | 57.5x50x35 |



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Lead styles



| Fixing pitch and distance between lugs (mm) | | | | |
|---|------|---------|-----|---|
| Lugs | L | P1 | P2 | S |
| S,V,F | 42.5 | 23 - 28 | 11 | 6 |
| | 57.5 | 37 - 42 | 24 | 6 |
| SM8,VM8, FM8 | 42.5 | 25 - 26 | 11 | 8 |
| | 57.5 | 39 - 40 | 24 | 8 |
| T,W,G | 42.5 | 20 - 25 | 8 | 6 |
| | 57.5 | 34 - 39 | 21 | 6 |
| TM8,WM8,GM8 | 42.5 | 22 - 23 | 8 | 8 |
| | 57.5 | 36 - 37 | 21 | 8 |
| N,P | 57.5 | 23 - 28 | 11 | 6 |
| NM8, PM8 | 57.5 | 25 - 26 | 11 | 8 |
| A | 42.5 | 51 - 64 | --- | 8 |
| | 57.5 | 65 - 78 | --- | 8 |
| B | 42.5 | 32 - 45 | 17 | 6 |