



## 506PHC250K

HIGH FREQUENCY/ SWITCHING  
Parts are RoHS compliant

**APPLICATIONS:** industrial controls, Motor speed controls, Resonant circuits, induction heaters, Electronic ballasts, Audio, SMPS

### ELECTRICAL SPECIFICATIONS

|                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Capacitance:</b> 50 $\mu$ F                                                      | <b>Tolerance:</b> -10 % , +10 %                                   |
| <b>Dissipation Factor:</b> 0.0015 Max at 1000 Hz and 25°C                           | <b>Temperature Range:</b> -40°C to +85°C                          |
| <b>Temperature Coefficient:</b> -200 PPM/°C: -100 PPM/°C, 100 PPM/°C                | Above 85°C the rated (DC/AC) voltage must be derated at per N/A°C |
| <b>Ripple Current:</b> 14 A at 100 kHz and 70°C                                     | <b>WVDC:</b> 250 Volts DC                                         |
| <b>ESR:</b> 3.5 milliOhms (typical) at 100 kHz and 25°C                             | <b>SVDC:</b> 400 Volts DC                                         |
| <b>Self Inductance:</b> 1 Nanohenries maximum per mm of body length and lead length | <b>VAC:</b> 160 Volts AC                                          |
| <b>dvdt:</b> 20 V/ $\mu$ s                                                          |                                                                   |

**Terminal to Terminal Dielectric strength:** 2 times the rated DC voltage when applied between the terminals for 10 seconds

**Terminal to case Dielectric strength:** 3000 VAC when applied between the terminals and case for 60 seconds

**Insulation Resistance (Terminal to Terminal):** 30000 MINIMUM after 100 Volts DC is applied for 60 seconds at 20°C

**Insulation resistance (Terminal to Case):** N/A Megohms MINIMUM after 0 Volts DC is applied for 0 seconds at 0

**Reliability:** 300 failures/billion component hours

**Load Life:** 100000/30000 hours at 70°C with 100% of rated voltage

**Capacitance Change:**  $\leq$ 3% of initially measured value

**D.F. Change:**  $\leq$ 200% of maximum specified value

**I.R. Change:**  $>$ 50% of minimum specified value

### PHYSICAL DIMENSIONS

**Diameter (D):** 40 mm, MAX mm

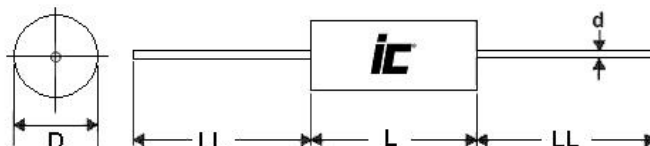
**Length (L):** 55 mm, MAX mm

**Lead Finish:** Matte Tin

**Lead Spacing (S):** mm, +/- mm

**Lead Diameter (d):** 1.2 mm, +/-0.05 mm

**Lead Length (LL):** 35mm, +/- MIN mm



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