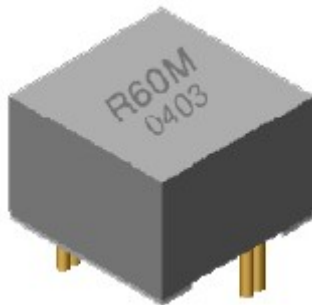


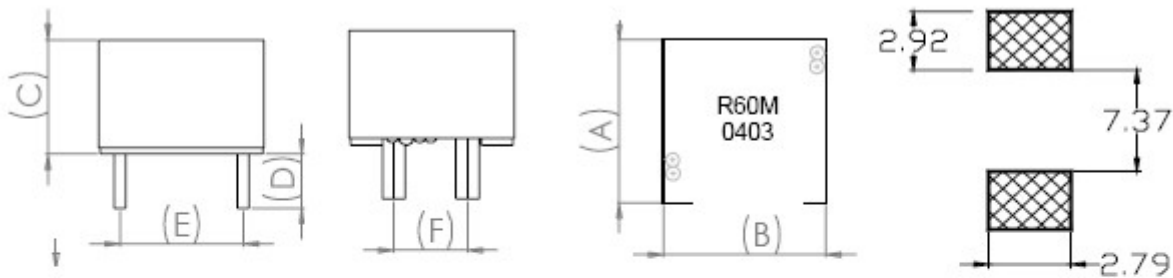
KL DIP POWER CHOKE



Features

- Magnetic shielded construction for high density board assembly
- High performance excellent DC current characteristics
- Large energy storage capacity
- Up to 40 amps continuous
- Custom designs available

Dimension



Unit: mm

| TYPE | A | B | C | D | E | F |
|--------|---------|---------|--------|---------|----------|---------|
| KL1209 | 11.5MAX | 11.5MAX | 8.6MAX | 3.4±0.5 | 8.5±0.5 | 3.5±0.5 |
| KL1210 | 11.5MAX | 11.5MAX | 10MAX | 3.4±0.5 | 8.5±0.5 | 3.5±0.5 |
| KL1409 | 14.0MAX | 14.0MAX | 8.5MAX | 3.4±0.5 | 11.5±0.5 | 6.5±0.5 |
| KL1410 | 14.0MAX | 14.0MAX | 10MAX | 3.4±0.5 | 11.5±0.5 | 6.5±0.5 |



Product Identification

KL 1410 M B R60

(1) (2) (3) (4) (5)

(1) Type: DIP Power Choke

(2) Dimensions(mm): 1209=11.5mm×11.5mm×8.6mm, 1210=11.5mm×11.5mm×10mm.

1409=14mm×14mm×8.5mm, 1410=14mm×14mm×10mm.

(3) Tolerance: M=20%, L=15%, K=10%.

(4) Packaging style: B=Bulk

(5) Inductance: R60=0.6uH, 1R0=1.0uH, 100=10uH.

Electrical Characteristics

● 1209 TYPE

| Part Number | L (uH) | Tole. (%) | Test Frequency (KHz) | RDC (mΩ) Max | IDC (A) Min |
|-------------|--------|-----------|----------------------|--------------|-------------|
| KL1209□BR25 | 0.25 | 20% | 100 | 0.62 | 40 |
| KL1209□BR40 | 0.4 | 20% | 100 | 0.75 | 40 |
| KL1209□BR50 | 0.5 | 20% | 100 | 1.50 | 40 |

● 1210 TYPE

| Part Number | L (uH) | Tole. (%) | Test Frequency (KHz) | RDC (mΩ) Max | IDC (A) Min |
|-------------|--------|-----------|----------------------|--------------|-------------|
| KL1210□BR47 | 0.47 | 20% | 100 | 1.50 | 35 |
| KL1210□BR50 | 0.5 | 20% | 100 | 1.30 | 35 |
| KL1210□B1R2 | 1.2 | 20% | 100 | 3.50 | 25 |
| KL1210□B2R2 | 2.2 | 20% | 100 | 4.00 | 20 |

● 1409 TYPE

| Part Number | L (uH) | Tole. (%) | Test Frequency (KHz) | RDC (mΩ) Max | IDC (A) Min |
|-------------|--------|-----------|----------------------|--------------|-------------|
| KL1409□BR60 | 0.6 | 20% | 100 | 1 | 30 |
| KL1409□B1R0 | 1.0 | 20% | 100 | 2 | 30 |
| KL1409□B1R2 | 1.2 | 20% | 100 | 2 | 30 |
| KL1409□B1R5 | 1.5 | 20% | 100 | 2 | 25 |
| KL1409□B2R2 | 2.2 | 20% | 100 | 3 | 20 |
| KL1409□B3R3 | 3.3 | 20% | 100 | 4.5 | 20 |



Electrical Characteristics

● 1410 TYPE

| Part Number | L (uH) | Tole. (%) | Test Frequency (KHz) | RDC (mΩ) Max | IDC (A) Min |
|-------------|--------|-----------|----------------------|--------------|-------------|
| KL1410□BR30 | 0.3 | 20% | 100 | 0.8 | 60 |
| KL1410□BR50 | 0.5 | 20% | 100 | 1 | 40 |
| KL1410□BR60 | 0.6 | 20% | 100 | 1 | 40 |
| KL1410□BR90 | 0.9 | 20% | 100 | 1.8 | 30 |
| KL1410□B1R0 | 1.0 | 20% | 100 | 2 | 30 |
| KL1410□B1R2 | 1.2 | 20% | 100 | 2 | 30 |
| KL1410□B1R5 | 1.5 | 20% | 100 | 2.2 | 25 |
| KL1410□B2R2 | 2.2 | 20% | 100 | 3 | 20 |
| KL1410□B3R3 | 3.3 | 20% | 100 | 3 | 15 |
| KL1410□B4R7 | 4.7 | 20% | 100 | 5 | 15 |

Note:*AT 25MHZ **AT7.9MHZ

When ordering please specify tolerance and packaging code.

Ex : PMC129- R60M- S Tolerance: M ± 20% L ± 15% K ± 10% Packaging: Clear Tape and Reel(Stadar)

L Q :HP4287A SRF :HP8753D/E4991A RDC:Digital Multimeter SC-7401

Operating Temperature °C Range-40 to+125 °C

Reliability Of Ferrite Wire Wound Power Inductor

1-1Mechanical Performance

| No | Item | Specification | Test Method |
|-------|------------------------------|--|---|
| 1-1-1 | Vibration | Appearance: No damage L change: within±10% Q change: within±30% RDC: within specification | Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs |
| 1-1-2 | Resistance to Soldering Heat | Appearance: No Damage | Pre-heating:150°C, 1Min. Solder Composition: Sn/Ag/Cu= 95.6/3.0/0.5 Solder Temperature: 260±5°C Immersion Time: 4±1Sec. |
| 1-1-3 | Solderability | The electrodes shall be at least 90% covered with new solder coating | Pre-heating: 150°C, 1min Solder Composition: Sn/Ag/Cu= 95.6/3.0/0.5 Solder Temperature: 250±5°C Immersion Time: 4±1sec |



1-2 Environmental Performance

| No | Item | Specification | Test Method | | | | | | | | | | | | | | | |
|-------|-----------------------------|--|---|------|------------------|------------|---|-------|----|---|------|---|---|------|----|---|------|---|
| 1-2-1 | Temperature Shock | Appearance: No damage L change: within±10% Q change: within±30% RDC: within specification | 10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to -55 °C 30 minutes exposure to 125 °C 15 seconds maximum transition between temperatures | | | | | | | | | | | | | | | |
| 1-2-2 | Temperature Cycle | | One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>3</td> </tr> <tr> <td>3</td> <td>85±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>3</td> </tr> </tbody> </table> | Step | Temperature (°C) | Time (min) | 1 | -25±3 | 30 | 2 | 25±2 | 3 | 3 | 85±3 | 30 | 4 | 25±2 | 3 |
| Step | Temperature (°C) | Time (min) | | | | | | | | | | | | | | | | |
| 1 | -25±3 | 30 | | | | | | | | | | | | | | | | |
| 2 | 25±2 | 3 | | | | | | | | | | | | | | | | |
| 3 | 85±3 | 30 | | | | | | | | | | | | | | | | |
| 4 | 25±2 | 3 | | | | | | | | | | | | | | | | |
| | | | Total: 100cycles Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |
| 1-2-3 | Humidity Resistance | | Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |
| 1-2-4 | Heat Temperature Resistance | | Temperature: 85±3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |
| 1-2-5 | Low Temperature Resistance | | Temperature: -25±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |

* Storage Temperature :25±3°C ;<80%RH