

PIC201610LDQ1 TYPE

●FEATURE

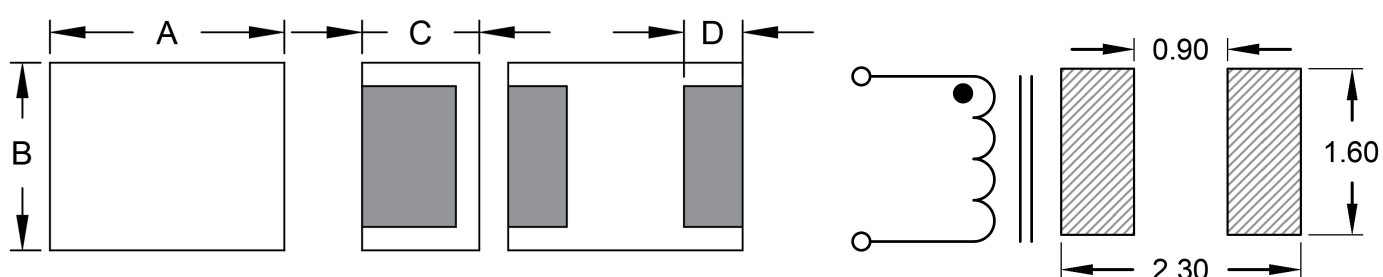
1. Shielded construction(height=1.00mm Max.)
2. Frequency range up to 5MHz, Low DCR(Ω)
3. AEC-Q200 Qualified

●Applications

1. Notebook, server application, High current power supplier

●Shape and Dimension

●Schematics and Land Patterns(mm)



A=2.0±0.2mm ; B=1.6±0.2mm ; C=1.00mm Max. ; D=0.5±0.3mm

●Specification

| P/N | L (μ H) | RDC (m Ω) Max. | Isat (A) | | Irms (A) | |
|--------------------|--------------|---------------------------|----------|------|----------|------|
| | | | Typ. | Max. | Typ. | Max. |
| PIC201610LDQ1-R10M | 0.10±20% | 12.0 | 9.0 | 8.1 | 6.0 | 5.4 |
| PIC201610LDQ1-R24M | 0.24±20% | 20.0 | 6.8 | 6.3 | 5.8 | 5.3 |
| PIC201610LDQ1-R33M | 0.33±20% | 27.0 | 6.6 | 6.2 | 4.6 | 4.1 |
| PIC201610LDQ1-R47M | 0.47±20% | 29.0 | 6.0 | 5.4 | 4.4 | 4.1 |
| PIC201610LDQ1-1R0M | 1.0±20% | 65.0 | 3.8 | 3.4 | 3.3 | 3.1 |
| PIC201610LDQ1-1R5M | 1.5±20% | 97.0 | 3.5 | 3.2 | 2.5 | 2.3 |
| PIC201610LDQ1-2R2M | 2.2±20% | 140.0 | 2.7 | 2.5 | 2.3 | 2.1 |
| PIC201610LDQ1-4R7M | 4.70±20% | 288.0 | 1.8 | 1.6 | 1.3 | 1.1 |

Note1. Measurement frequency of Inductance value : at 1MHz, 1V

Note2. Measurement ambient temperature of L, DCR and IDC : at 25°C

Note3. Isat: DC current at which the inductance drops 30%(Typ.) from its value without current

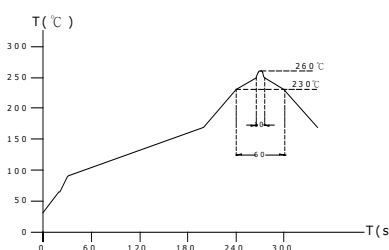
Note4. Irms: Average current for 40°C temperature rise from 25°C ambient(Typ.)

Note5. Packaging: Taping ; Quantity: 3000 Pieces/Reel

GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO + 125°C (Includes temperature when the coil is heated)
2. High temperature exposure(storage) refer MIL-STD-202 Method 108: 1000 hrs at rated operating temperature(e.g. 125°C). Part can be stored for 1000 hrs @125°C. Unpowered. Measurement at 24±4 hours after test conclusion.
3. Temperature cycling refer JESD22 Method JA-104: 1000 cycles(-40 TO + 125°C). Measurement at 24±4 hours after test conclusion. 30 min maximum dwell time at each temp. extreme. 1 min. maximum transition time.
4. Biased Humidity refer MIL-STD-202 Method 103: 1000 hours 85°C/85%RH. Unpowered. Measurement at 24±4 hours after test conclusion.
5. Operational Life refer MIL-PRF-27: 1000 hrs. at 125 °C tested. Measurement at 24±4 hours after test conclusion.
6. External Visual refer MIL-STD-883 Method 2009: Inspect device construction, marking and workmanship.
7. Physical Dimension refer JESD22 Method JB-100: Verify physical dimensions to the applicable device detail specification.
8. Resistance to Solvents refer MIL-STD-202 Method 215: Add aqueous wash chemical - OKEM clean or equivalent.
9. Mechanical Shock refer MIL-STD-202 Method 213: Figure 1 of Method 213. Condition C.
10. Vibration refer MIL-STD-202 Method 204: 5g;s for 20 minutes, 12 cycles each of 3 orientations. Test from 10-2000 Hz.
11. Resistance to soldering Heat refer MIL-STD-202 Method 210: Condition B No pre-heat of samples. Single wave solder-procedure 2 for SMD and procedure 1 for leaded with solder within 1.5mm of device body.
12. ESD refer AEC-Q200-002 or ISO/DIS 10605: Direct contact discharge 2kV.
13. Solderability refer J-STD-002: For both Leaded & SMD. Magnification 50X. Conditions: Leaded, Method A@235°C,category 3 ; SMD, a)Method B, 4hrs@125°C dry heat @235°C, b)Method B@215°C category 3., c)Method D category 3@260°C
14. Electrical Characterization refer spec: Show Min, Max Mean and Standard deviation at room from Min and Max temperature.
15. Flammability refer UL-94: V-0 or V-1 Acceptable.
16. Board Flex refer AEC-Q200-005: 60 sec minimum holding time.
17. Terminal Strength(SMD) refer AEC-Q200-006
18. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition

