AEC-Q200

FENG-JUI TECHNOLOGY CO., LTD

PIC252012LDQ1 TYPE

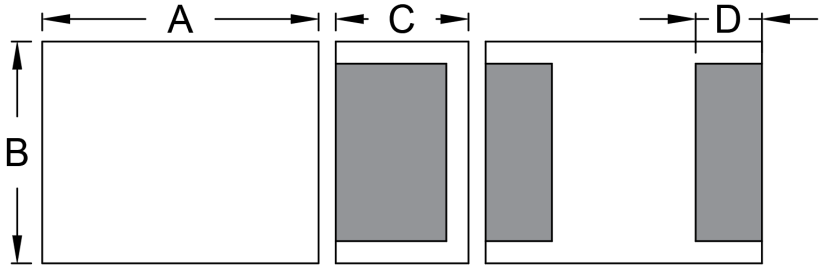
●FEATURE

1. Shielded construction(height=1.20mm Max.)
2. 100% lead (Pb) free meet RoHS standard
3. Low DCR to achieve high conversion efficiency and lower temperature rising
4. AEC-Q200 Qualified

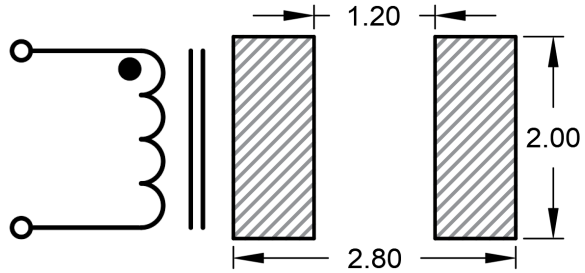
●Applications

1. DC/DC converter for CPU in Notebook PC
2. Cellular phones, LCD displays, HDDs, DVCs, DSCs, PDAs etc..
3. Thin type on-board power supply module for exchanger

●Shape and Dimension



●Schematics and Land Patterns(mm)



A=2.50±0.20mm ; B=2.0±0.2mm ; C=1.20mm Max. ; D=0.60±0.30mm.

●Specification

P/N	L (μH)	RDC (mΩ) Typ.	RDC (mΩ) Max.	Isat (A) Typ.	Isat (A) Max.	Irms (A) Typ.	Irms (A) Max.
PIC252012LDQ1-R47M	0.47±20%	16	22	6.8	6.2	5.8	4.9
PIC252012LDQ1-1R0M	1.00±20%	36	44	4.8	4.3	3.9	3.3
PIC252012LDQ1-2R2M	2.20±20%	74	89	3.5	3.2	2.5	2.2

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

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

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

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

Note5. Packaging: Taping ; Quantity: 3000 Piece/reel

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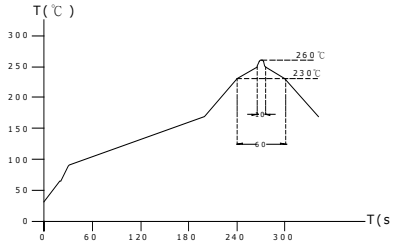
GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO + 125℃(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℃). Part can be stored for 1000 hrs @125℃. Unpowered. Measurement at 24±4 hours after test conclusion.
3. Temperature cycling refer JESD22 Method JA-104: 1000 cycles(-40 TO + 125℃). 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℃/85%RH. Unpowered. Measurement at 24±4 hours after test conclusion.
5. Operational Life refer MIL-PRF-27: 1000 hrs. at 125 ℃ 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℃,category 3 ; SMD, a)Method B, 4hrs@125℃ dry heat @235℃, b)Method B@215℃ category 3., c)Method D category 3@260℃
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