

PIC04020Q1 TYPE

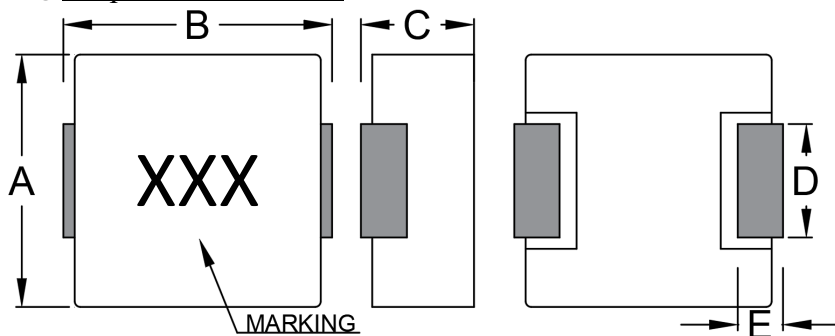
●FEATURE

1. Shielded construction
2. Alloy metal material used, Low DCR ,Low Buzz Noise
3. AEC-Q200 Qualified

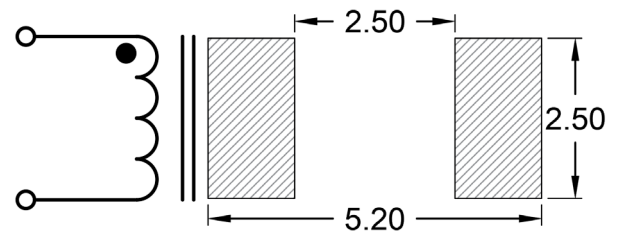
●Applications

1. Notebook, server application, High current power supplier

●Shape and Dimension



●Schematics and Land Patterns(mm)



A=4.45mm Max. ; B=4.75mm Max. ; C=2.00mm Max. ; D= See SPEC table ; E=0.80±0.30mm

●Specification

P/N	L (uH)	RDC (mΩ) Typ.	RDC (mΩ) Max.	Isat (A)	Irms (A)	D(mm) ±0.30
PIC04020Q1-R22M	0.22±20%	6.0	6.6	12.5	9.5	2.0
PIC04020Q1-R33M	0.33±20%	9.0	11.0	12.0	8.0	2.0
PIC04020Q1-R47M	0.47±20%	12.5	14.0	9.5	7.5	2.0
PIC04020Q1-R56M	0.56±20%	14.0	16.0	9.3	7.3	2.0
PIC04020Q1-R68M	0.68±20%	16.0	18.0	9.0	7.0	2.0
PIC04020Q1-1R0M	1.00±20%	24.0	27.0	7.0	6.0	2.0
PIC04020Q1-1R5M	1.50±20%	38.0	46.0	6.0	5.0	2.0
PIC04020Q1-2R2M-T2	2.20±20%	52.0	58.0	5.0	4.5	1.5
PIC04020Q1-3R3M	3.30±20%	74.0	87.0	4.0	3.3	2.0
PIC04020Q1-4R7M-T2	4.70±20%	92.0	105.0	3.0	2.8	1.5
PIC04020Q1-6R8M	6.80±20%	160.0	175.0	2.5	2.1	2.0
PIC04020Q1-100M	10.0±20%	256.0	282.0	2.2	1.6	2.0

Note1. Measurement frequency of Inductance value : at 100kHz, 1.0V

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

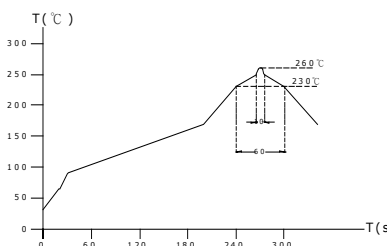
Note4. Irms: Average current for 40°C temperature rise from 25°C ambient(Typ.)

Note5. Packaging: Taping ; Quantity: 3000 Pieces/Reel ; T2: 2000 Pieces/Reel

GENERAL CHARACTERISTICS

1. Operating temperature range: -55 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(-55 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

