

PIC05030Q TYPE

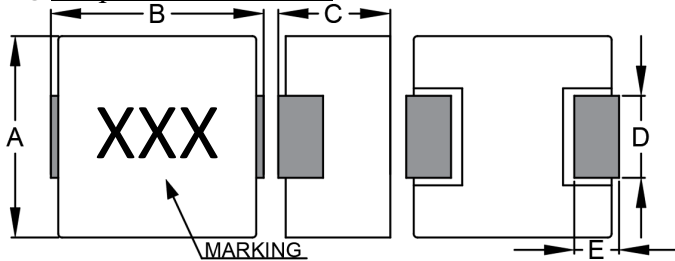
● FEATURE

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

● Applications

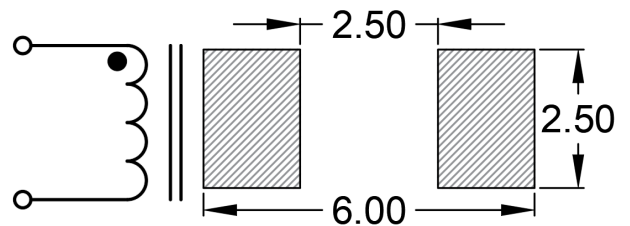
1. Notebook, server application, High current power supplier

● Shape and Dimension



A=5.40mm Max. ; B=5.70mm Max. ; C=3.00mm Max. ; D=2.20±0.30mm ; E=1.20±0.30mm

● Schematics and Land Patterns(mm)



● Specification

P/N	L (uH)	RDC (mΩ) Typ.	RDC (mΩ) Max.	Isat (A)	Irms (A)
PIC05030Q-R10M	0.10±20%	2.40	3.00	33.0	25.0
PIC05030Q-R22M	0.22±20%	4.25	5.00	20.0	16.0
PIC05030Q-R33M	0.33±20%	4.50	5.50	18.0	14.0
PIC05030Q-R47M	0.47±20%	7.40	8.50	12.0	11.0
PIC05030Q-R68M	0.68±20%	11.00	12.00	11.5	9.0
PIC05030Q-1R0M	1.00±20%	13.00	14.00	11.0	8.5
PIC05030Q-1R2M	1.20±20%	15.00	16.00	11.0	8.5
PIC05030Q-1R5M	1.50±20%	20.00	25.00	8.5	8.2
PIC05030Q-2R2M	2.20±20%	25.00	29.00	7.5	7.0
PIC05030Q-3R3M	3.30±20%	32.00	38.00	6.0	5.5
PIC05030Q-4R7M	4.70±20%	50.00	60.00	5.0	4.5
PIC05030Q-6R8M	6.80±20%	75.00	90.00	4.0	3.5
PIC05030Q-100M	10.0±20%	110.00	125.00	3.5	3.2

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

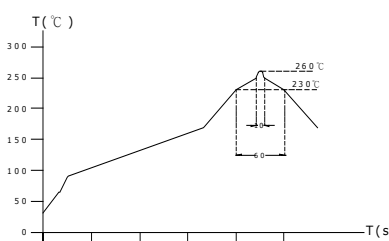
Note4. Irms: Average current for 40°C temperature rise from 25°C ambient(Typ.)

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

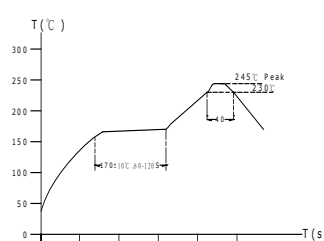
GENERAL CHARACTERISTICS

1. Operating temperature range: -55 TO + 155°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. 155°C). Part can be stored for 1000 hrs @155°C. Unpowered. Measurement at 24±4 hours after test conclusion.
3. Temperature cycling refer JESD22 Method JA-104: 1000 cycles(-55 TO + 155°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 155 °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@155°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



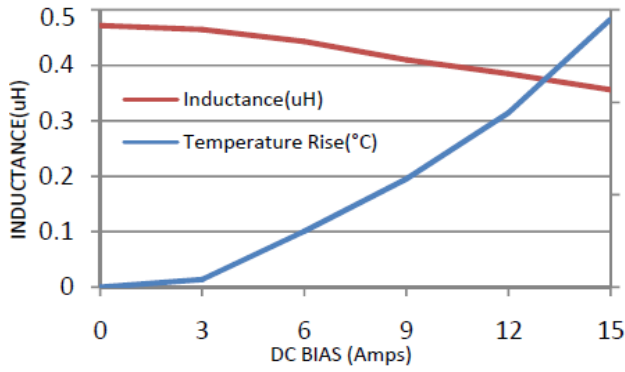
Lead-free the recommended reflow condition



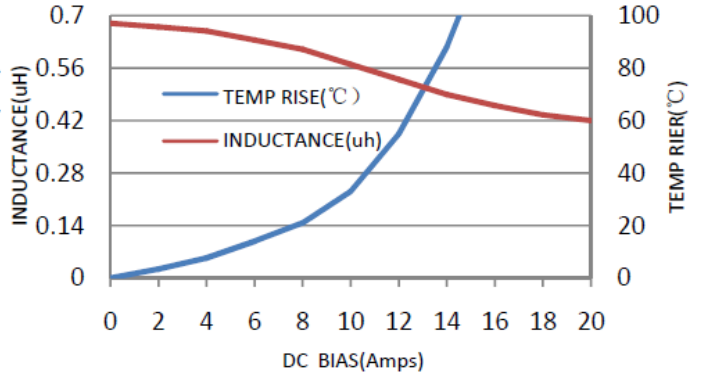
You are the winner

● Typical Electrical Curve: Inductance VS Isat , Irms VS TEMP.

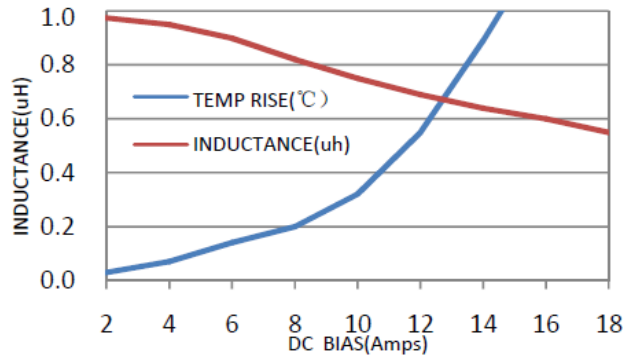
PIC05030Q-R47M



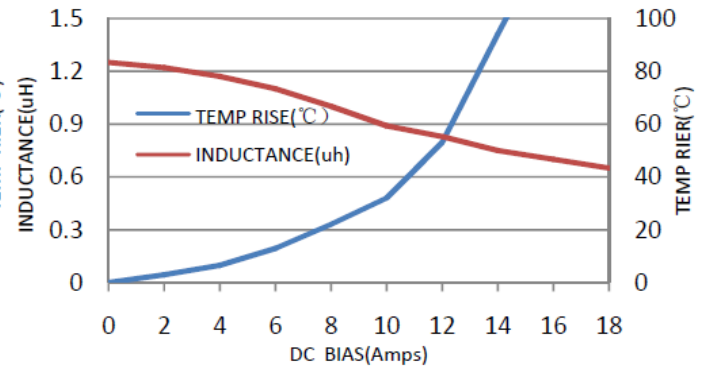
PIC05030Q-R68M



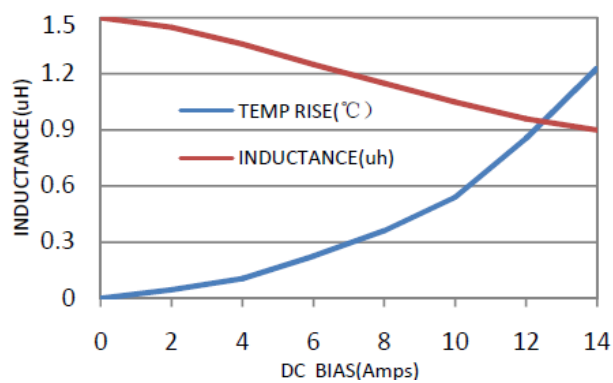
PIC05030Q-1R0M



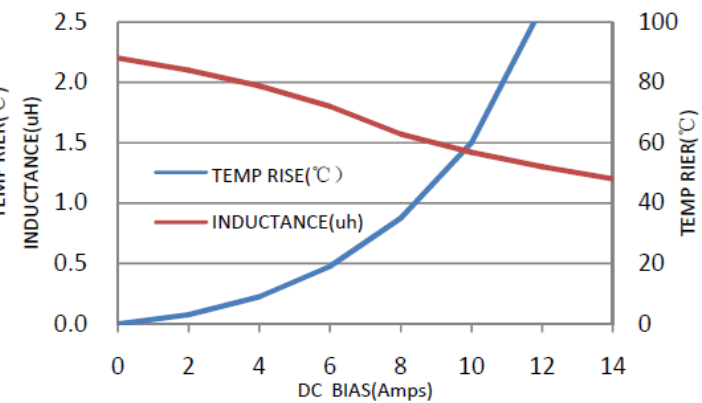
PIC05030Q-1R2M



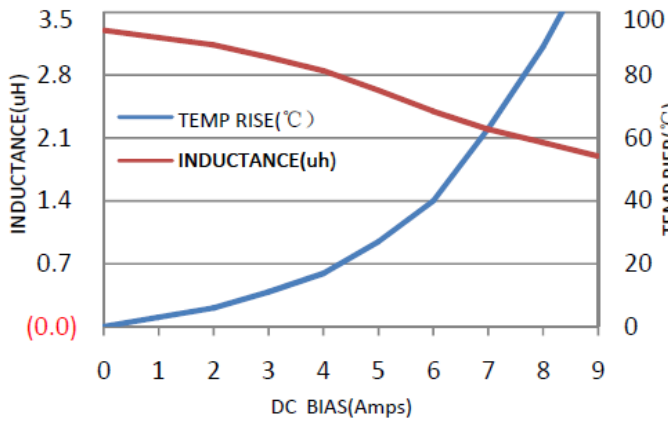
PIC05030Q-1R5M



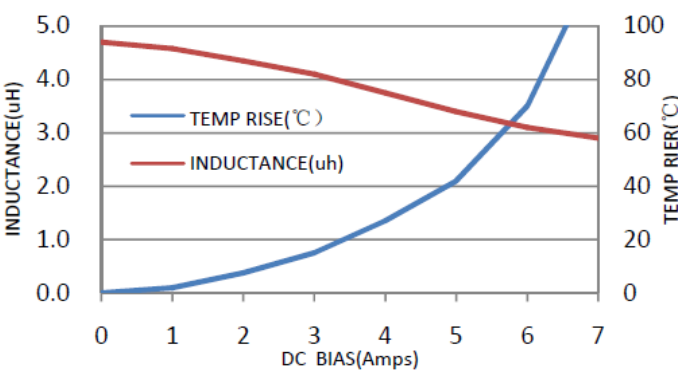
PIC05030Q-2R2M



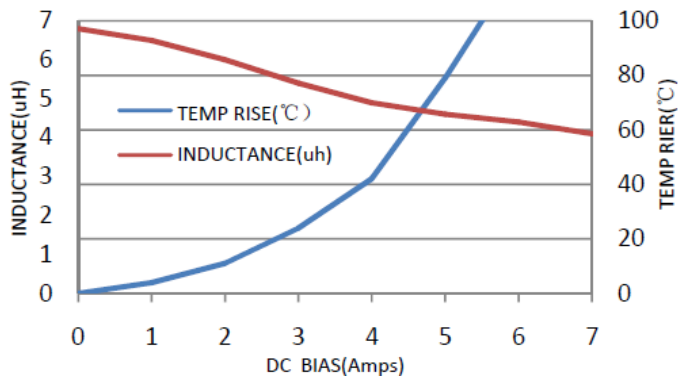
PIC05030Q-3R3M



PIC05030Q-4R7M



PIC05030Q-6R8M



PIC05030Q-100M

