AEC-Q200

FENG-JUI TECHNOLOGY CO., LTD

PIT07050Q1 TYPE

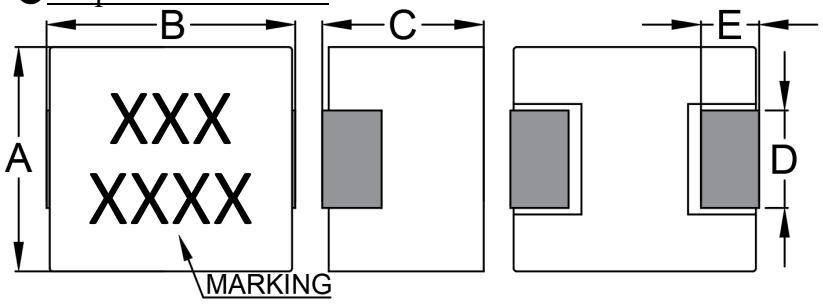
●FEATURE

1. Shielded construction
2. Low Buzz Noise
3. AEC-Q200 Qualified

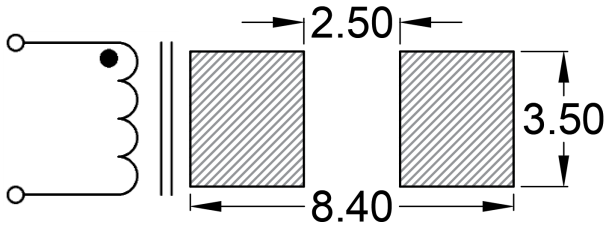
●Applications

1. Server, High current power supplies, DC/DC converters

●Shape and Dimension



●Schematics and Land Patterns(mm)



A=6.60±0.30mm ; B=7.30±0.30mm ; C=5.00mm Max. ; D=3.00±0.30mm ; E=1.80±0.30mm

●Specification

P/N	L (uH)	RDC (mΩ) Typ.	RDC (mΩ) Max.	Isat (A)	Irms (A)
PIT07050Q1-R10N	0.10±30%	0.65	0.78	65.0	32.0
PIT07050Q1-R15N	0.15±30%	1.30	1.70	50.0	30.0
PIT07050Q1-R22M	0.22±20%	1.60	1.90	35.0	25.0
PIT07050Q1-R33M	0.33±20%	2.50	3.00	32.0	25.0
PIT07050Q1-R47M	0.47±20%	3.50	3.90	30.0	22.0
PIT07050Q1-R56M	0.56±20%	3.60	4.20	27.0	20.0
PIT07050Q1-R68M	0.68±20%	4.00	4.50	24.0	18.0
PIT07050Q1-R82M	0.82±20%	4.60	4.90	22.0	16.5
PIT07050Q1-1R0M	1.00±20%	6.10	6.50	20.0	15.0
PIT07050Q1-1R5M	1.50±20%	8.60	9.00	16.5	12.0
PIT07050Q1-2R2M	2.20±20%	11.20	12.00	14.0	10.0
PIT07050Q1-3R3M	3.30±20%	19.00	20.90	12.0	8.0
PIT07050Q1-4R7M	4.70±20%	28.00	30.80	10.0	6.5
PIT07050Q1-5R6M	5.60±20%	43.50	49.00	9.0	6.0
PIT07050Q1-6R8M	6.80±20%	46.00	51.50	8.5	5.5

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P/N	L (uH)	RDC (mΩ) Typ.	RDC (mΩ) Max.	Isat (A)	Irms (A)
PIT07050Q1-8R2M	8.20±20%	56.00	63.00	8.0	5.0
PIT07050Q1-100M	10.0±20%	60.00	69.00	7.5	4.0
PIT07050Q1-150M	15.0±20%	81.00	92.00	6.0	3.5
PIT07050Q1-220M	22.0±20%	140.00	170.00	5.5	2.5
PIT07050Q1-330M	33.0±20%	173.00	200.00	3.5	2.0
PIT07050Q1-470M	47.0±20%	290.00	330.00	2.7	1.9
PIT07050Q1-560M	56.0±20%	342.00	396.00	2.1	1.6
PIT07050Q1-680M	68.0±20%	386.00	445.00	2.0	1.2

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

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

Note3. Isat: DC current at which the inductance drops 20%(Typ.) from its value without current

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

Note5. Packaging: Taping ; Quantity: 800 Pieces/Reel

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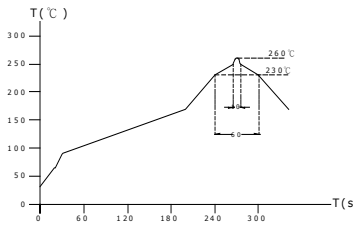
GENERAL CHARACTERISTICS

1. Operating temperature range: -55 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(-55 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