

PI13067Q1 TYPE

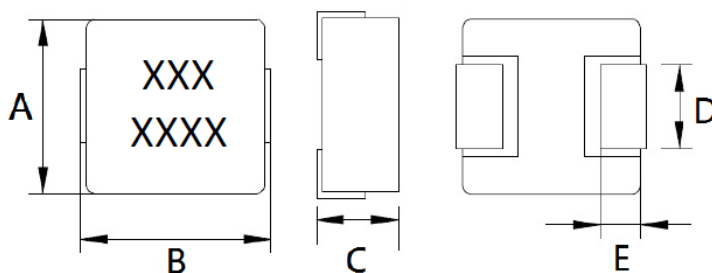
●FEATURE

1. Shielded construction , Frequency range up to 5MHz
2. AEC-Q200 Grade 1 qualified

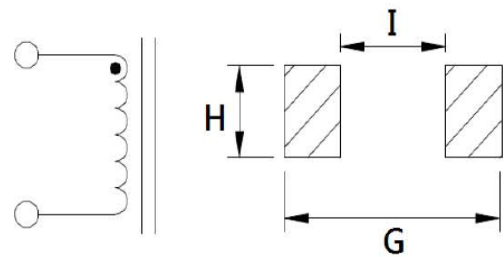
●Applications

1. DC-DC Automotive

●Shape and Dimension



●Schematics and Land Patterns(mm)



A=12.90m/m Max ; B=14.00m/m Max ; C=6.70m/m Max. ; D=refer Note.7 ; E=2.40m/m Ref. ; G=14.00m/m Ref. ; H=5.00m/m Ref. ; I=7.60m/m Ref.

●Specification

P/N	L (μ H)	RDC (m Ω) Typical	RDC (m Ω)Max	Isat (A)	Irms (A)
PI13067Q1-R10N	0.10 \pm 30%	0.25	0.50	80.0	60.0
PI13067Q1-R22M	0.22 \pm 20%	0.45	0.70	75.0	53.0
PI13067Q1-R30M	0.30 \pm 20%	0.50	0.80	72.0	48.0
PI13067Q1-R33M	0.33 \pm 20%	0.51	0.80	65.0	46.0
PI13067Q1-R40M	0.40 \pm 20%	0.60	1.00	64.0	44.0
PI13067Q1-R47M	0.47 \pm 20%	0.75	1.20	63.0	41.0
PI13067Q1-R56M	0.56 \pm 20%	0.90	1.40	62.0	37.0
PI13067Q1-R68M	0.68 \pm 20%	1.00	1.60	51.0	35.0
PI13067Q1-R82M	0.82 \pm 20%	1.55	1.90	50.0	33.0
PI13067Q1-1R0M	1.0 \pm 20%	1.85	2.00	49.0	32.0
PI13067Q1-1R2M	1.2 \pm 20%	2.30	2.50	45.0	30.0
PI13067Q1-1R5M	1.5 \pm 20%	2.30	3.00	40.0	25.0
PI13067Q1-2R2M	2.2 \pm 20%	3.50	4.20	33.0	22.0
PI13067Q1-3R3M	3.3 \pm 20%	5.50	6.80	29.0	18.0
PI13067Q1-4R7M	4.7 \pm 20%	9.80	11.2	25.0	13.5

P/N	L (μ H)	RDC (m Ω) Typical	RDC (m Ω)Max	Isat (A)	Irms (A)
PI13067Q1-5R6M	5.6 \pm 20%	10.5	11.5	21.0	12.0
PI13067Q1-6R8M	6.8 \pm 20%	13.8	14.9	16.5	11.5
PI13067Q1-8R2M	8.2 \pm 20%	15.1	16.6	16.0	10.5
PI13067Q1-100M	10 \pm 20%	17.5	18.5	15.5	10.0

Note1. Measurement frequency of Inductance value : at 100KHz

Note2. Measurement ambient temperature of L, DCR and IDC : at 25 $^{\circ}$ C

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

Note4. Irms: Average current for 40 $^{\circ}$ C temperature rise from 25 $^{\circ}$ C ambient(typical)

Note5. Inductance tolerance: M: \pm 20%

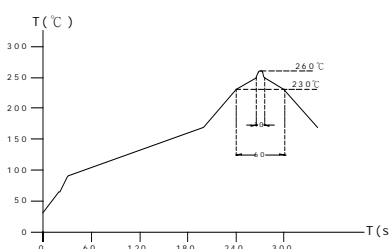
Note6. Packaging: Taping ; Quantity: 250pcs/reel

Note7. D Dimension range: R10~1R5, D=4.0 \pm 0.5mm ; 2R2, D=3.0 \pm 0.5mm ; 3R3~100, D=4.7 \pm 0.3 mm

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

