

TPRH1207Q1 TYPE

●FEATURE

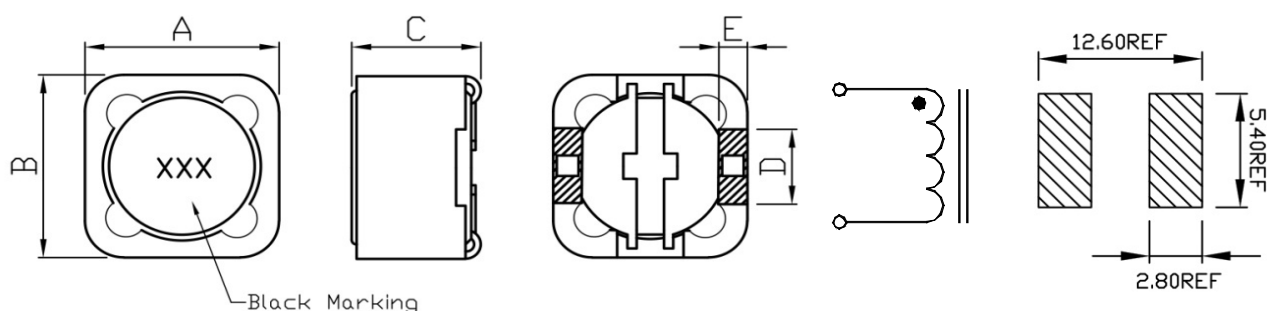
1. Low core loss for high frequency power application
2. Large terminal surface

●Applications

1. Automotive for AEC-Q200 Qualified(125 degree)

●Shape and Dimension

●Schematics and Land Patterns(mm)



A=12.0±0.30mm ; B=12.0±0.30mm ; C=8.00mm Max. ; D=5.00±0.30mm ; E=2.20±0.30mm

●Specification

Part Number	L (uH)	STAMP	DCR (Ω) Max.	Rated current (A)
TPRH1207Q1-1R0N	1.0±30%	1R0	0.007	10.00
TPRH1207Q1-2R2N	2.2±30%	2R2	0.012	8.00
TPRH1207Q1-3R3N	3.3±30%	3R3	0.013	7.80
TPRH1207Q1-4R7N	4.7±30%	4R7	0.016	6.80
TPRH1207Q1-6R8N	6.8±30%	6R8	0.019	6.10
TPRH1207Q1-8R2N	8.2±30%	8R2	0.021	5.70
TPRH1207Q1-100M	10±20%	100	0.022	5.40
TPRH1207Q1-120M	12±20%	120	0.025	4.90
TPRH1207Q1-150M	15±20%	150	0.027	4.50
TPRH1207Q1-180M	18±20%	180	0.040	3.90
TPRH1207Q1-220M	22±20%	220	0.044	3.60
TPRH1207Q1-270M	27±20%	270	0.046	3.40
TPRH1207Q1-330M	33±20%	330	0.065	3.00
TPRH1207Q1-390M	39±20%	390	0.073	2.75
TPRH1207Q1-470M	47±20%	470	0.100	2.50
TPRH1207Q1-560M	56±20%	560	0.110	2.35

Part Number	L (uH)	STAMP	DCR (Ω) Max.	Rated current (A)
TPRH1207Q1-680M	68±20%	680	0.140	2.10
TPRH1207Q1-820M	82±20%	820	0.160	1.95
TPRH1207Q1-101M	100±20%	101	0.220	1.70
TPRH1207Q1-121M	120±20%	121	0.250	1.60
TPRH1207Q1-151M	150±20%	151	0.280	1.42
TPRH1207Q1-181M	180±20%	181	0.350	1.30
TPRH1207Q1-221M	220±20%	221	0.390	1.16
TPRH1207Q1-271M	270±20%	271	0.560	1.06
TPRH1207Q1-331M	330±20%	331	0.640	0.95
TPRH1207Q1-391M	390±20%	391	0.700	0.88
TPRH1207Q1-471M	470±20%	471	0.980	0.79
TPRH1207Q1-561M	560±20%	561	1.070	0.73
TPRH1207Q1-681M	680±20%	681	1.460	0.67
TPRH1207Q1-821M	820±20%	821	1.640	0.60
TPRH1207Q1-102M	1000±20%	102	1.820	0.55

Note1. Measurement frequency of Inductance value : at 100kHz, 0.25V

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

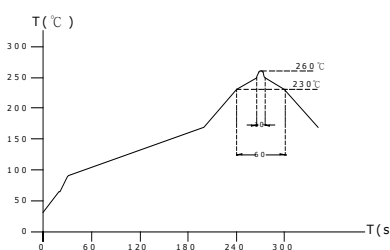
Note3. The rated current indicates the current when the inductance decreases to 75% over of it's nominal value or D.C. current when the temperature rising $\Delta T=30^{\circ}\text{C}$ lower, whichever is lower

Note4. Packaging: Taping ; Quantity: 500 Pieces/Reel

GENERAL CHARACTERISTICS

1. Operating temperature range: $-40^{\circ}\text{C} + 125^{\circ}\text{C}$ (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(-40 to $+ 125^{\circ}\text{C}$). 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 $85^{\circ}\text{C}/85\%\text{RH}$. 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@ 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

