

TPRH1207BQ1 TYPE

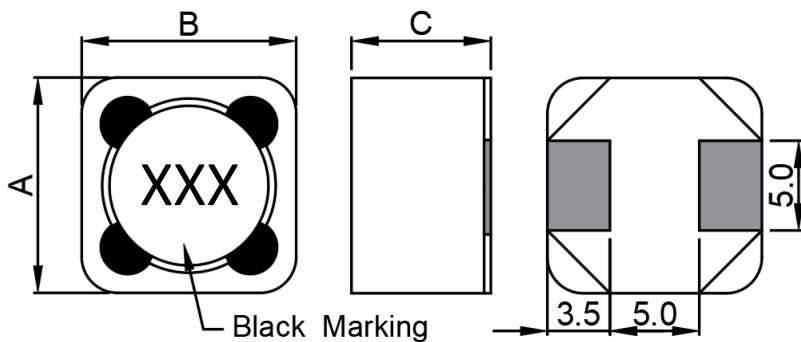
●FEATURE

1. Low core loss for high frequency power application
2. Large terminal surface
3. AEC-Q200 Qualified

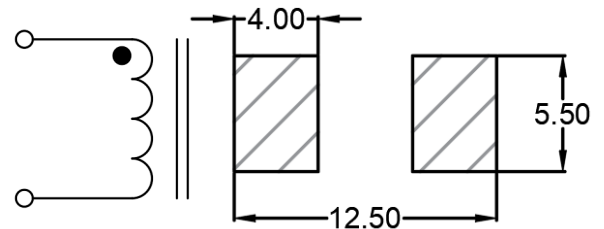
●Applications

1. Portable communication equipment, notebook computer
2. Hard Disk drives, and other electronic equipment

●Shape and Dimension



●Schematics and Land Patterns(mm)



A=12.0±0.40mm ; B=12.0±0.40mm ; C=8.25mm Max.

●Specification

Part Number	L(uH)	DCR(mΩ) Max.	Isat(A)	Irms(A)
TPRH1207BQ1-1R4M	1.4±20%	9.8	30.6	10.0
TPRH1207BQ1-4R7M	4.7±20%	15.5	15.9	6.2
TPRH1207BQ1-5R6M	5.6±20%	17.5	14.6	6.2
TPRH1207BQ1-6R8M	6.8±20%	21.3	13.7	6.0
TPRH1207BQ1-8R2M	8.2±20%	22.6	12.3	5.9
TPRH1207BQ1-100M	10±20%	24.3	11.2	5.7
TPRH1207BQ1-120M	12±20%	25.8	10.7	5.2
TPRH1207BQ1-150M	15±20%	31.0	9.0	4.9
TPRH1207BQ1-180M	18±20%	34.3	7.74	4.5
TPRH1207BQ1-220M	22±20%	39.5	7.24	4.0
TPRH1207BQ1-270M	27±20%	50.0	7.02	3.6
TPRH1207BQ1-330M	33±20%	68.8	6.30	3.1
TPRH1207BQ1-390M	39±20%	76.8	5.80	3.0
TPRH1207BQ1-470M	47±20%	80.4	5.32	2.9
TPRH1207BQ1-560M	56±20%	89.2	4.90	2.7
TPRH1207BQ1-680M	68±20%	101.5	4.26	2.6
TPRH1207BQ1-820M	82±20%	139.9	3.80	2.3

Part Number	L(μ H)	DCR(m Ω) Max.	Isat(A)	Irms(A)
TPRH1207BQ1-101M	100 \pm 20%	150.2	3.52	2.2
TPRH1207BQ1-121K	120 \pm 10%	202.6	3.24	1.90
TPRH1207BQ1-151K	150 \pm 10%	240.6	3.02	1.80
TPRH1207BQ1-181K	180 \pm 10%	254.5	2.74	1.70
TPRH1207BQ1-221K	220 \pm 10%	359.6	2.36	1.60
TPRH1207BQ1-271K	270 \pm 10%	461.8	2.18	1.20
TPRH1207BQ1-331K	330 \pm 10%	541.5	2.00	1.00
TPRH1207BQ1-391K	390 \pm 10%	592.9	1.88	1.00
TPRH1207BQ1-471K	470 \pm 10%	786.2	1.64	0.90
TPRH1207BQ1-561K	560 \pm 10%	863.8	1.50	0.80
TPRH1207BQ1-681K	680 \pm 10%	1162	1.38	0.75
TPRH1207BQ1-821K	820 \pm 10%	1296	1.26	0.70
TPRH1207BQ1-102K	1000 \pm 10%	1483	1.14	0.68

Note1. Measurement frequency of Inductance value : at 100kHz, 0.1V

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

Note3. The rated current indicates the current when the inductance decreases to 30% over of it's nominal value or D.C. current when the temperature rising $\Delta T=40^{\circ}\text{C}$ lower, whichever is lower

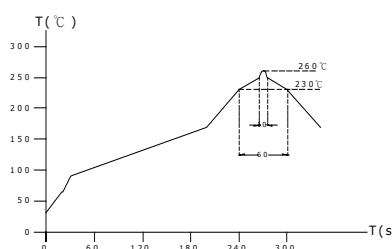
● Order Code(Part Number)

1. TYPE NAME : TPRH1207BQ1
2. INDUCTANCE VALUE : 100(10 μ H)
3. INDUCTANCE TOLERANCE : M(\pm 20%) ; K(\pm 10%)

GENERAL CHARACTERISTICS

1. Operating temperature range: -40 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(-40 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

