TPRH 6D38Q1TYPE

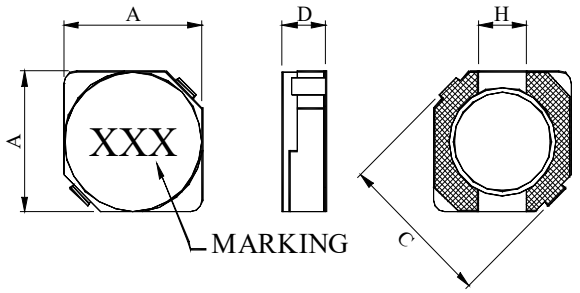
●FEATURE

1. Various high power inductors are superior to be high saturation for surface mounting
2. AEC-Q200 Qualified

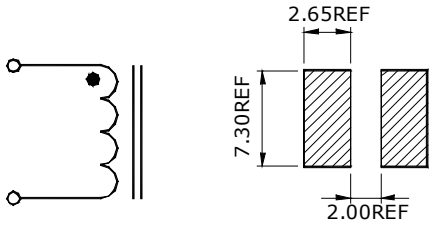
●Applications

1. DC-DC converter of portable equipment
2. Digital Camera, Notebook, Camcorder and others

●Shape and Dimension



●Schematics and Land Patterns(mm)



A=6.70±0.30 mm Max. ; D=4.00mm Max.; C=9.50mm Typ ; H=2.00mm Ref.

MARKING= Inductance value

●Specification

Part Number	L(uH)	Marking	DCR(Ω Max)	Rated Current(A)
TPRH6D38Q1-2R2□	2.2	2R2	0.020	4.00
TPRH6D38Q1-3R3□	3.3	3R3	0.020	3.50
TPRH6D38Q1-4R7□	4.7	4R7	0.024	3.00
TPRH6D38Q1-5R0□	5.0	5R0	0.024	2.90
TPRH6D38Q1-5R6□	5.6	5R6	0.026	2.80
TPRH6D38Q1-6R2□	6.2	6R2	0.027	2.66
TPRH6D38Q1-6R8□	6.8	6R8	0.029	2.40
TPRH6D38Q1-7R4□	7.4	7R4	0.031	2.30
TPRH6D38Q1-8R7□	8.7	8R7	0.034	2.20
TPRH6D38Q1-100□	10	100	0.038	2.00
TPRH6D38Q1-120□	12	120	0.053	1.70
TPRH6D38Q1-150□	15	150	0.057	1.60
TPRH6D38Q1-180□	18	180	0.092	1.50
TPRH6D38Q1-220□	22	220	0.096	1.30
TPRH6D38Q1-270□	27	270	0.109	1.20
TPRH6D38Q1-330□	33	330	0.124	1.10
TPRH6D38Q1-390□	39	390	0.138	1.00

Part Number	L(uH)	Marking	DCR(Ω Max)	IDC(A)(Max)
TPRH6D38Q1-470□	47	470	0.155	0.95
TPRH6D38Q1-560□	56	560	0.202	0.85
TPRH6D38Q1-680□	68	680	0.234	0.75
TPRH6D38Q1-820□	82	820	0.324	0.70
TPRH6D38Q1-101□	100	101	0.358	0.65
TPRH6D38Q1-151□	150	151	0.600	0.50
TPRH6D38Q1-181□	180	181	0.700	0.49
TPRH6D38Q1-221□	220	221	0.850	0.40
TPRH6D38Q1-331□	330	331	1.16	0.30

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

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

Note3. IDC:The rated current indicates the current when the inductance decreases to 65% over of it's nominal value or D.C. current when the temperature rising Δt=40℃ lower, whichever is lower

Note4. Inductance tolerance: N: ±30% ; M: ±20%

Note5. Ordering Code: TYPE NAME: TPRH6D38Q1

Main Inductance: 100 (10uH)

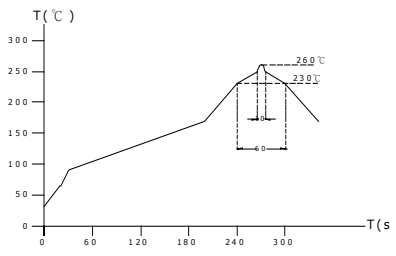
Tolerance : □ (see note 4)

Note6.Packaging: Taping ; Quantity: 1000 Pieces/reel

GENERAL CHARACTERISTICS

1. Operating temperature range: -40 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(-40 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