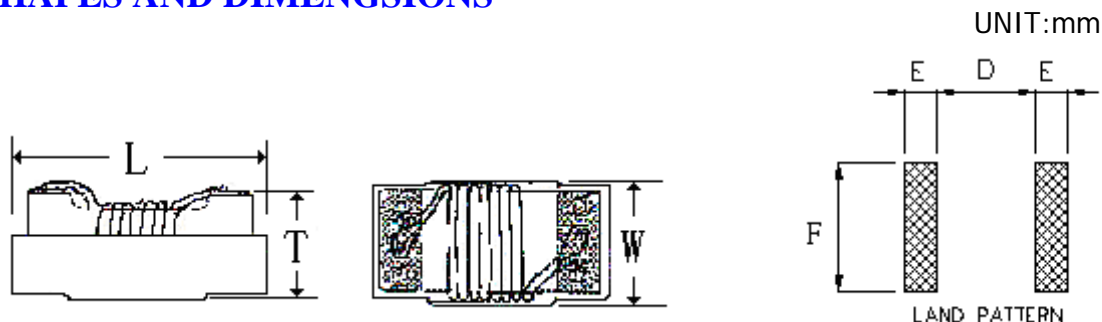


Wire Wound Chip Inductor

1. SHAPES AND DIMENSIONS



| CODE | | L(Max) | W(Max) | T(Max) | E(Typ.) | F(Typ.) | D(Typ.) |
|-----------|------------|--------|--------|--------|---------|---------|---------|
| DIMENSION | 1005(0402) | 1.19 | 0.66 | 0.64 | 0.40 | 0.64 | 0.64 |
| | 1608(0603) | 1.80 | 1.25 | 1.20 | 0.64 | 1.02 | 0.64 |
| | 2012(0805) | 2.29 | 1.73 | 1.52 | 1.02 | 1.78 | 0.76 |
| | 2520(1008) | 2.92 | 2.70 | 2.23 | 1.02 | 2.54 | 1.27 |
| | 3225(1210) | 3.50 | 2.90 | 2.25 | 1.02 | 2.54 | 1.78 |
| | 4532(1812) | 4.80 | 3.40 | 3.15 | 1.14 | 3.05 | 3.00 |

2. PART NUMBERING SYSTEM

SCW 2012 F R47 J S T HF
 1 2 3 4 5 6 7 8

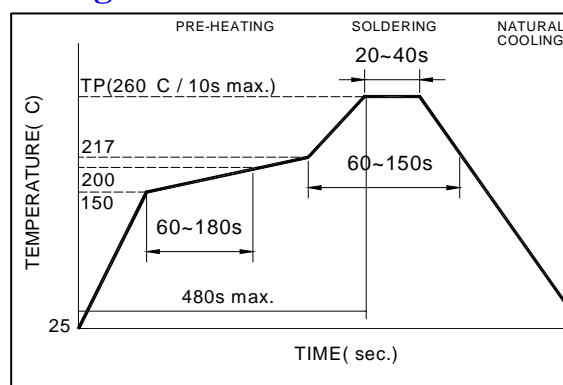
- 1 PRODUCT SYMBOL (产品代号)
- 2 DIMENSIONS (规格尺寸)
- 3 MATERIAL (芯片类型)
- 4 INDUCTANCE (电感量)
- 5 TOLERANCE (公差) : F±1%; G±2%; J±5%; K±10%; M±20%
- 6 TERMINAL (端电极材料) : G-金端头; S-锡端头; Y-银钯端头
- 7 PACKAGING (包装方式) : T-编带盘装; B-散装
- 8 PHOSPHATE FREE (无红磷)

3. ELECTRICAL CHARACTERISTICS @25

| No. | Part Number | L | Freq | Tolerance | Q | SRF | Rdc | Idc |
|-----|----------------|------|-------|-----------|-------|----------|--------|---------|
| | | (uH) | (MHz) | | (min) | (MHz)min | (Ω)max | (mA)max |
| 1 | SCW2012FR47*ST | 0.47 | 7.9 | J,K | 12 | 500 | 0.31 | 720 |
| 2 | SCW2012F1R0*ST | 1.0 | 7.9 | J,K | 12 | 360 | 1.00 | 430 |
| 3 | SCW2012F1R2*ST | 1.2 | 7.9 | J,K | 12 | 350 | 1.15 | 410 |
| 4 | SCW2012F1R5*ST | 1.5 | 7.9 | J,K | 20 | 330 | 0.83 | 700 |
| 5 | SCW2012F2R2*ST | 2.2 | 7.9 | J,K | 12 | 170 | 1.50 | 350 |
| 6 | SCW2012F3R3*ST | 3.3 | 7.9 | J,K | 12 | 90 | 1.80 | 300 |
| 7 | SCW2012F4R7*ST | 4.7 | 7.9 | J,K | 12 | 85 | 2.05 | 250 |
| 8 | SCW2012F6R8*ST | 6.8 | 8.9 | J,K | 12 | 55 | 2.60 | 220 |
| 9 | SCW2012F8R2*ST | 8.2 | 9.9 | J,K | 12 | 50 | 3.00 | 180 |
| 10 | SCW2012F100*ST | 10 | 10.9 | J,K | 10 | 30 | 3.20 | 150 |
| 11 | SCW2012F150*ST | 15 | 11.9 | J,K | 10 | 16 | 4.20 | 100 |
| 12 | SCW2012F220*ST | 22 | 12.9 | J,K | 10 | 14 | 6.00 | 80 |
| 13 | SCW2012F330*ST | 33 | 13.9 | J,K | 10 | 17 | 10.70 | 60 |
| 14 | SCW2012F680*ST | 68 | 14.9 | J,K | 8 | 11 | 17.50 | 40 |

4. Recommended Soldering Conditions

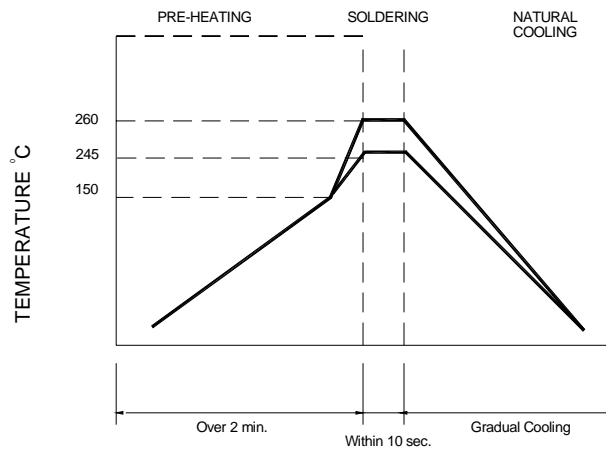
Figure 1.
Re-flow
Soldering (Lead
Free)



Note:

- Preheat circuit and products to 150°C
- 280°C tip temperature (max)

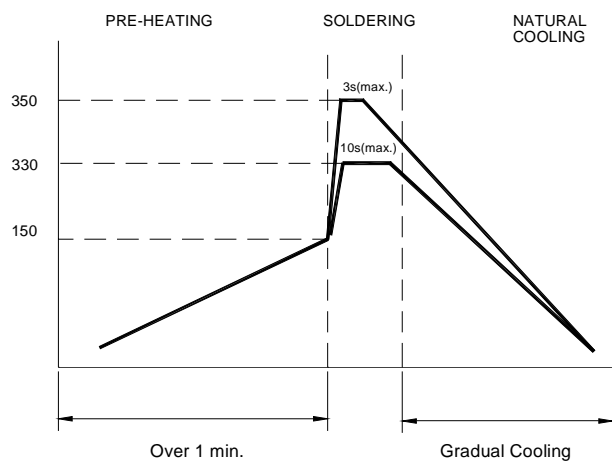
**Figure 2.
Wave Soldering**



Note :

- Never contact the ceramic with the iron tip
- 1.0mm tip diameter (max)

**Figure 3.
Hand Soldering**

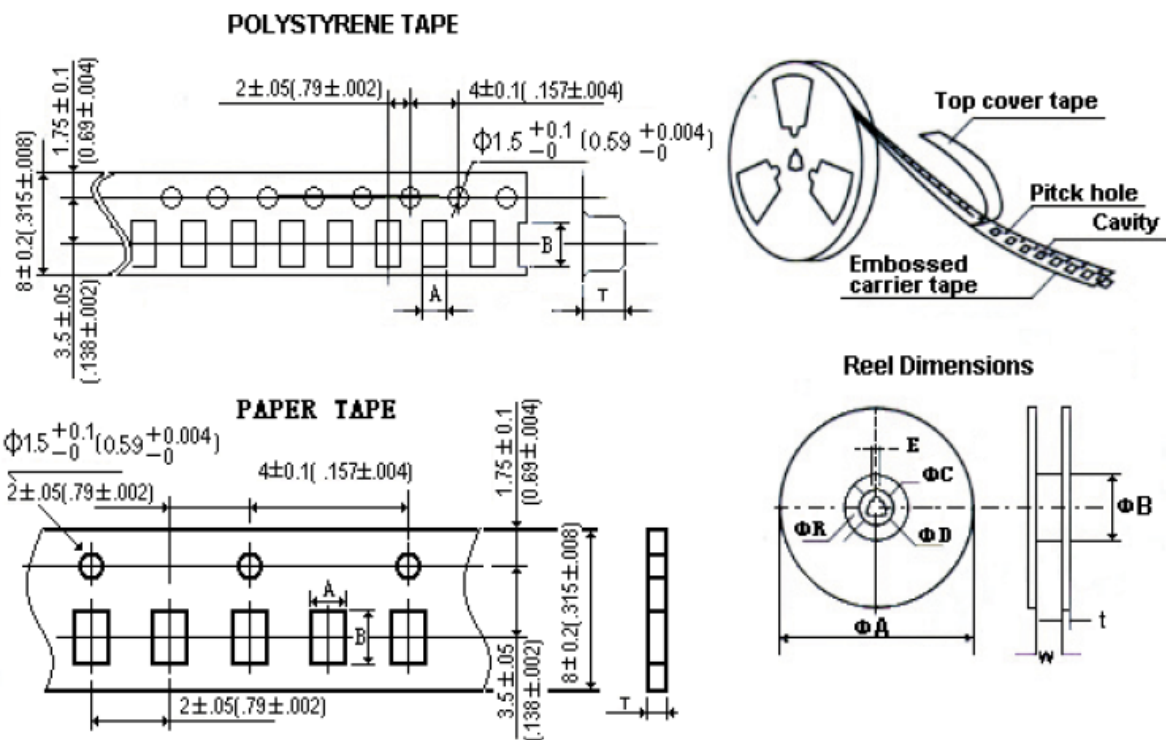


Note:

- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 3 sec.

5. PACKAGING(unit: mm)

Tape



unit:(mm)

| | | A | B | T |
|----|------|------|------|------|
| 纸带 | 0402 | 0.74 | 1.23 | 0.60 |
| 胶带 | 0603 | 1.15 | 1.83 | 0.95 |
| | 0805 | 1.85 | 2.40 | 1.45 |
| | 1008 | 2.73 | 2.90 | 2.34 |
| | 1210 | 2.96 | 3.60 | 2.40 |
| | 1812 | 3.22 | 4.82 | 3.15 |

| unit | ΦA | ΦB | ΦC | ΦD | E | W | t | R |
|------|-----|----|----|----|---|----|---|---|
| mm | 178 | 60 | 13 | 21 | 2 | 10 | 2 | 1 |
| | 330 | 75 | 13 | 23 | 2 | 12 | 2 | 1 |

包装数量

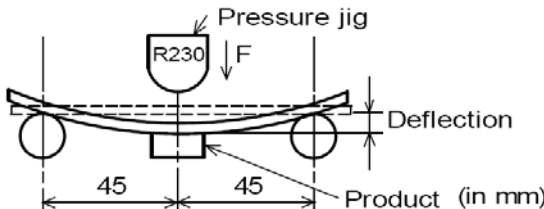
Packaging Quantity

| 规格 Dimension | 0402 | 0603 | 0805 | 1008 | 1210 | 1812 |
|------------------|-------|------|------|------|------|------|
| 数量 Quantity(pcs) | 10000 | 4000 | 3000 | 2000 | 2000 | 2000 |

6. 1 RELIABILITY TEST

| TEST ITEM | SPECIFICATION | | TEST CONDITION |
|------------------------------|---|-------------------------------------|---|
| | 0402UC、0603UC、 0805UC、1008UC、 1210UC | 0402IF、0805IF 、1210IF、 1812IF | |
| Operating Temperature Range | - 40 ~ +125°C | - 40 ~ +85°C | |
| Storage Temperature Range | - 40 ~ +125°C | - 40 ~ +85°C | |
| Rating current | 150~1360mA(max) | 40~1000mA (max) | Current sources:33010D |
| Inductance | 1.0~8600uH | 1.0~1000uH | Test Frequency:0.252~250MHz Test Equipment:HP4291A、HP4286A、HP4287A、 HP4284A Test Fixture:16193Aor16334A |
| Q | 16~65(min) | 10~35(min) | Test Frequency:0.252~1500MHz Test Equipment:HP4291A、HP4286A、HP4287A、 Test Fixture:16193Aor16334A |
| RDC | 0.030~9.00Ω(max) | 0.20~21.00Ω (max) | Test Equipment:HP4263B |
| SRF | 55~12500MHz(min) | 1.6~350MHz (min) | Test Equipment:HP4291A Test Fixture:16193A |
| Solderability | The metalized area must have more then 90%of solder coverage | | Soldering Temp:230±5°C Dippng time:5±1S |
| Resistance to soldering heat | No eviden ce of mechanical damage The mealized arer must have more then 75%of solder coverage Inductance change,less than±5% Q chanqe less than±10% | | Soldering Temp:260±5°C Dippng time:10±1S |
| Tehermal Shock | No eviden ce of mechanical damage Inductance change,less than±5% Q chanqe less than±10% | | A cycle contain:Step1:-40°C , 30Min Step2:-85°C , 30Min Cycle Times:10 |

6.2 RELIABILITY TEST

| | | |
|--------------------------|---|---|
| High Temperature Storage | No evidence of mechanical damage Inductance change, less than $\pm 5\%$ Q change less than $\pm 10\%$ | Test Temperature: $125 \pm 2^\circ\text{C}$ (Ceramic core) $85 \pm 2^\circ\text{C}$ (Ferrite core) Test Time: 96 ± 2 Hours |
| Low Temperature Storage | No evidence of mechanical damage Inductance change, less than $\pm 5\%$ Q change less than $\pm 10\%$ | Test Temperature: $-40 \pm 2^\circ\text{C}$ Test Time: 96 ± 2 Hours |
| Moisture Resistance | No evidence of mechanical damage Inductance change, less than $\pm 5\%$ Q change less than $\pm 10\%$ | Test Temperature: $50 \pm 2^\circ\text{C}$ Test Time: 100 Hours 相对湿度 90~95% |
| Vibration | No evidence of mechanical damage Inductance change, less than $\pm 5\%$ Q change less than $\pm 10\%$ | Amplitude: 1.5mm X、Y、Z方向各 1Hours45min Frequency range: 10~55~10Hz(min) |
| Component Adhesion | No evidence of mechanical damage No evidence of peel off or broken Keep continuity of Winding | Force: 2Kgf Test Time: 5 ± 1 秒 |
| Resistance to bend | No evidence of mechanical damage | Camber: 20mm Test Board: Glass-Epoxy board Thickness: 8mm  |
| Life | No evidence of mechanical damage Inductance change, less than $\pm 5\%$ Q change less than $\pm 10\%$ | Test Temperature: $85 \pm 2^\circ\text{C}$ Test Time: 1000 Hours with rating current Test Time: 96 ± 2 Hours |

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