

承 認 書

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

DESCRIPTION: _____ WIRE WOUND CHIP INDUCTOR _____

DDY PART NO: _____ KPS0603LD100KST _____

CUSTOMERMODELNO: _____

| DRAWING | | |
|---------|-------------|----------|
| MADE | CHECKED | APPROVED |
| 罗海玲 | 曾凡强 | 钟少芳 |
| DATE: | 2018年11月17日 | |

| CUSTOMER APPROVE |
|------------------|
| |

赣州研创光电科技有限公司

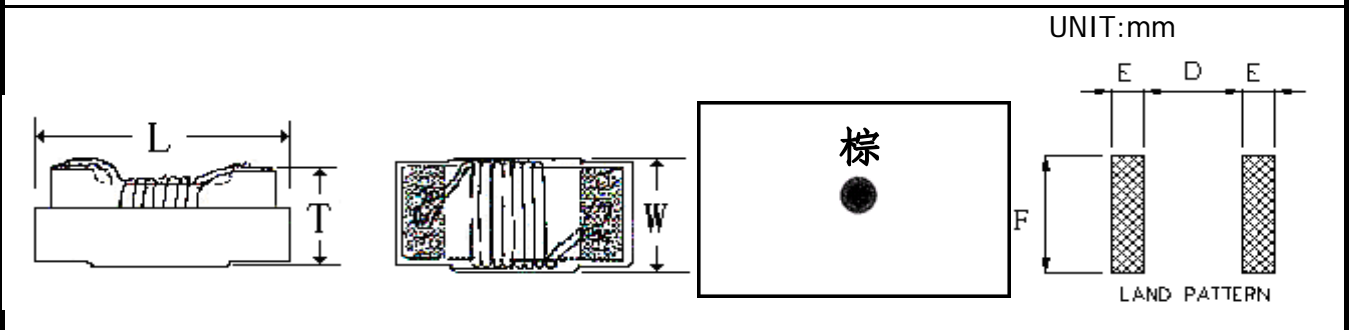
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|--------------|--------------------------|----------|-------------|
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CATALOG

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1.SHAPE & DIMENSION



| | | | | | | | |
|-----------|---------|---------|---------|----------|----------|----------|--|
| CODE | L | W | T | E | F | D | |
| DIMENSION | 1.80MAX | 1.25MAX | 1.20MAX | 0.64Typ. | 1.02Typ. | 0.64Typ. | |

2. ELECTRICAL CHARACTERISTICS @25°C

| ITEM | SPEC. RANGE | TEST CONDITION | TEST INSTRUMENTS |
|-----------------------|-------------|----------------|------------------|
| L (μH) | 10±10% | 2.5MHz | HP4286A |
| Q(品质系数) | 14 MIN | 2.5MHz | |
| DCR (Ω) | 2.40 MAX | | 502BC |
| I _{rms} (mA) | 280 MAX | | VR116+VR7210 |
| SRF (MHz) | 36 MIN | | E5071C ENA |

3. PART NUMBERING SYSTEM

| | | | | | | |
|-----|-------------------------------------|----|-----|---|---|---|
| KPS | □□□□ | □□ | □R□ | □ | □ | □ |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 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) : J±5%; K±10%; M±20% | | | | | |
| 6 | TERMINAL (端电极材料) : S-锡端头; | | | | | |
| 7 | PACKAGING (包装方式) : T-编带盘装; B-散装 | | | | | |

4.GENERAL SPECIFICATION

- a. Storage temp.: -40°C ~ +85°C ,R.H.: 30% ~ 70%,Operating temp.: -40°C~ +85°C.
- b. Moisture sensitivity level (MSL) 2 (1 year floor life at <30°C/85% relative humidity).
- c.Failures in time(FIT)/Mean Time Between Failures(MTBF) 38 per billion hours/26,315,789 hours,calculated per Telcordia SR-332.

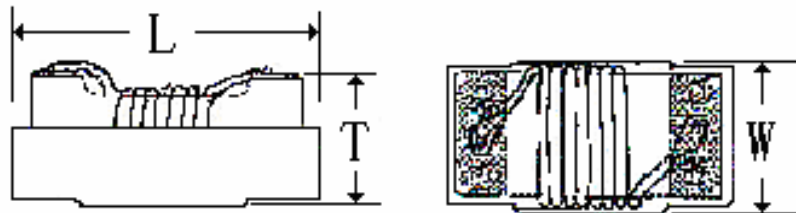
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| APPROVED BY | CHECKED BY | DRAFT |
| 罗海玲 | 曾凡强 | 钟少芳 |

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5. TEST DATA FOR SAMPLES

| TEST ITEM | L | Q(品质系数) | DCR | L | W | T | |
|-----------|-------------------|---------|--------------|---------|---------|---------|--|
| | (μH) | (min) | (Ω) | (mm) | (mm) | (mm) | |
| CON. | 2.5MHz | 2.5MHz | At 25°C | 1.80MAX | 1.25MAX | 1.20MAX | |
| SPEC. | 10 \pm 10% | 14 MIN | 2.40 MAX | | | | |
| 1 | 10.13 | 16.0 | 1.90 | 1.72 | 1.17 | 1.13 | |
| 2 | 9.95 | 18.0 | 1.92 | 1.69 | 1.15 | 1.11 | |
| 3 | 10.12 | 17.0 | 1.91 | 1.71 | 1.16 | 1.12 | |
| 4 | 9.97 | 16.0 | 1.90 | 1.70 | 1.17 | 1.13 | |
| 5 | 10.11 | 16.0 | 1.92 | 1.69 | 1.17 | 1.11 | |
| 6 | 9.98 | 18.0 | 1.91 | 1.72 | 1.15 | 1.12 | |
| 7 | 9.88 | 17.0 | 1.90 | 1.70 | 1.16 | 1.13 | |
| 8 | 9.88 | 16.0 | 1.90 | 1.71 | 1.17 | 1.11 | |
| 9 | 10.10 | 18.0 | 1.92 | 1.69 | 1.15 | 1.12 | |
| 10 | 9.89 | 17.0 | 1.91 | 1.72 | 1.16 | 1.11 | |
| X | 10.00 | 16.90 | 1.91 | 1.71 | 1.16 | 1.12 | |
| R | 0.25 | 2.00 | 0.02 | 0.03 | 0.02 | 0.02 | |

图示:

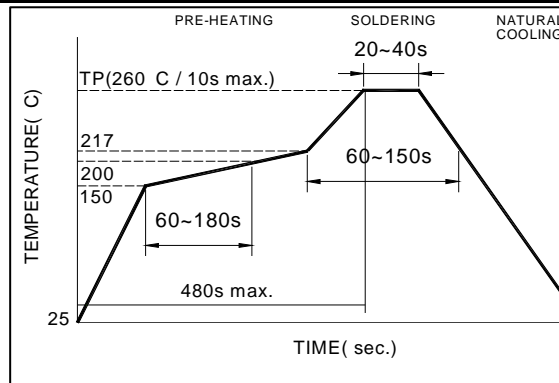


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6. SOLDERING CONDITIONS

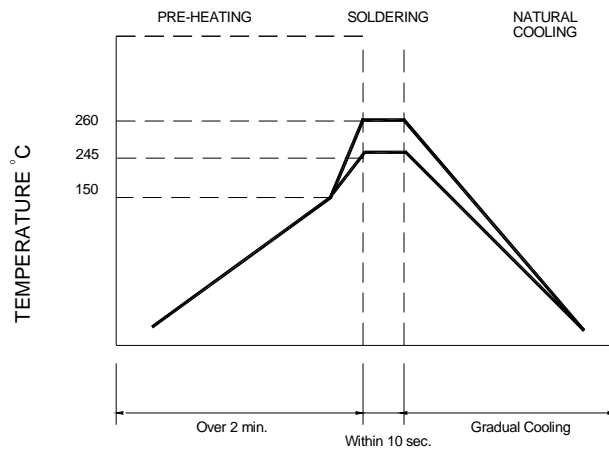
**Figure 1.
Re-flow
Soldering (Lead
Free)**



Note:

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

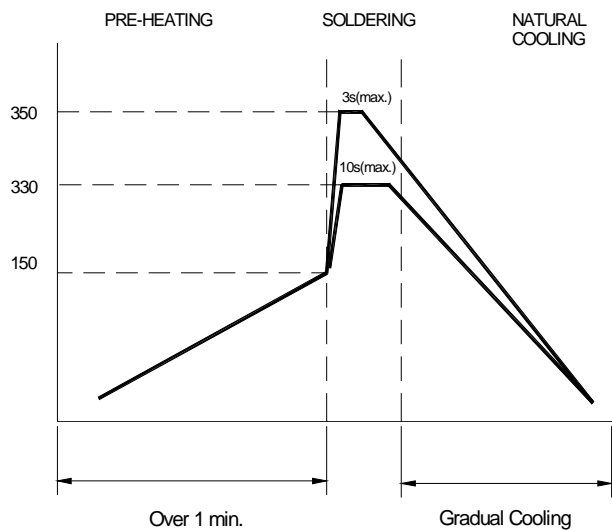
**Figure 2.
Wave Soldering**



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.

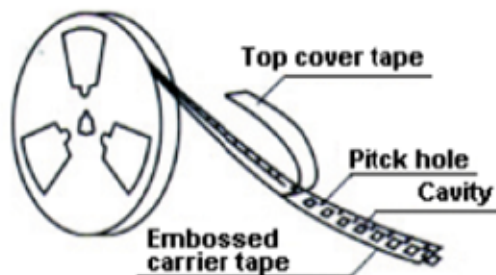
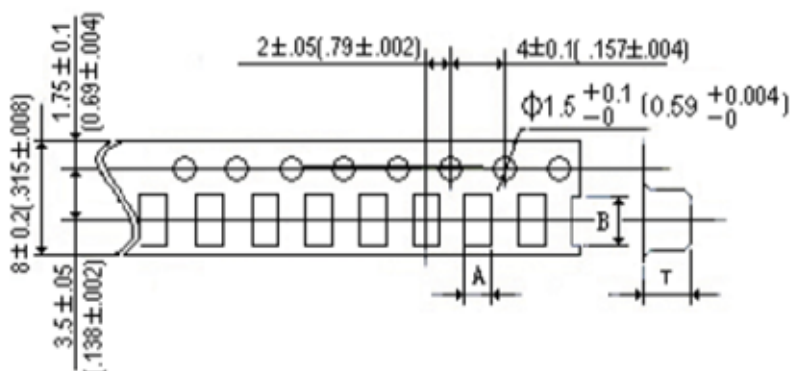
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| 罗海玲 | 曾凡强 | 钟少芳 |

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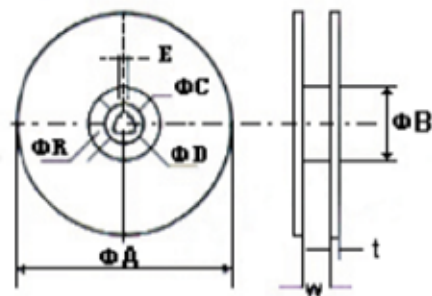
7. PACKAGING(unit: mm)

Tape

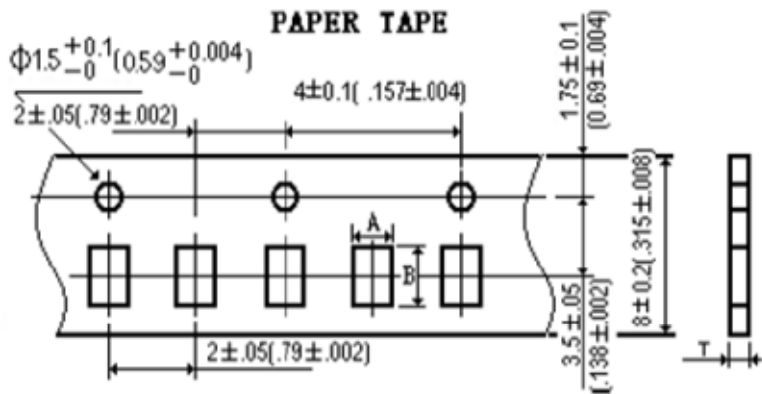
POLYSTYRENE TAPE



Reel Dimensions



PAPER TAPE



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

| 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 | 0402 | 0603 | 0805 | 1008 | 1210 | |
|---------|-------|------|------|------|------|--|
| 数量(pcs) | 10000 | 4000 | 2000 | 2000 | 2000 | |

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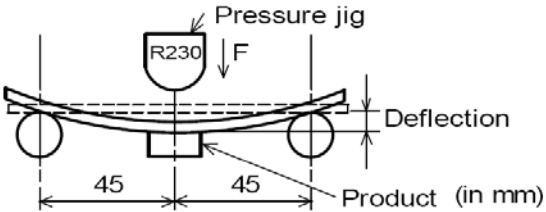
8. 1 RELIABILITY TEST

| TEST ITEM | SPECIFICATION | TEST CONDITION |
|------------------------------|--|--|
| Rating current | According to product specifications | Current sources:33010D |
| Inductance | According to product specifications | Test Frequency:0.252~250MHz Test Equipment:HP4291A、HP4286A、HP4287A、HP4284A Test Fixture:16193Aor16334A |
| Q | According to product specifications | Test Frequency:0.252~1500MHz Test Equipment:HP4291A、HP4286A、HP4287A、Test Fixture:16193Aor16334A |
| RDC | According to product specifications | Test Equipment:HP4263B |
| SRF | According to product specifications | Test Equipment:HP4291A Test Fixture:16193A |
| Solderability | The metalized area must have more then 90%of solder coverage | Soldering Temp:230±5℃ Dipping time:5±1S |
| Resistance to soldering heat | No evidence of mechanical damage The mealized arer must have more then 75%of solder coverage Inductance change,less than±5% Q change less than±10% | Soldering Temp:260±5℃ Dipping time:10±1S |
| Thermal Shock | No evidence of mechanical damage, Inductance change less than±5%, Q change less than±10% | A cycle contain:Step1:-40℃, 30Min Step 2:85℃, 30Min Cycle Times:10 |

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8.2 RELIABILITY TEST

| TEST ITEM | SPECIFICATION | TEST CONDITION |
|--------------------------|---|--|
| 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:100Hours relative humidity: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 each direction for 1Hour and 45min 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:2Kg Test Time: 5 ± 1 sec |
| 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:1000Hours with rating current |

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