

# 承 認 書

## SPECIFICATION FOR APPROVAL

CUSTOMER: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_ WIRE WOUND CHIP INDUCTOR \_\_\_\_\_

DDY PART NO: \_\_\_\_\_ KPS0603LD4R7KST \_\_\_\_\_

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

CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 1 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

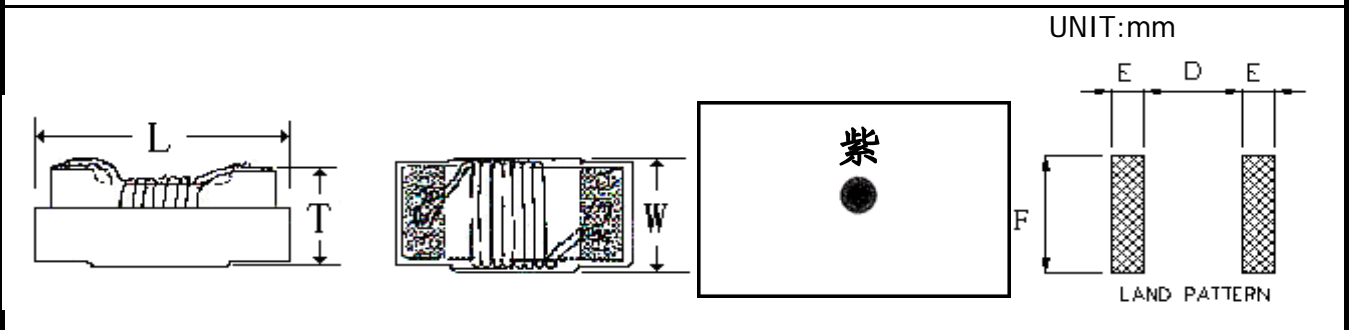
## CATALOG

Resume	.....	P2
Shape & Dimension	.....	P3
Characteristic	.....	P4
General specification	.....	P4
Soldering Conditions	.....	P5
Package Information	.....	P6
Reliabilty Test	.....	P7-8



CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 3 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

### 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)	4.70±10%	7.9MHz	HP4286A
Q(品质系数)	12 MIN	7.9MHz	
DCR (Ω)	1.26 MAX		502BC
I <sub>rms</sub> (mA)	400 MAX		VR116+VR7210
SRF (MHz)	51 MIN		E5071C ENA

### 3. PART NUMBERING SYSTEM

<b>KPS</b> □□□□ □□ □R□ □ □ □ — <b>1 2 3 4 5 6 7</b>
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.

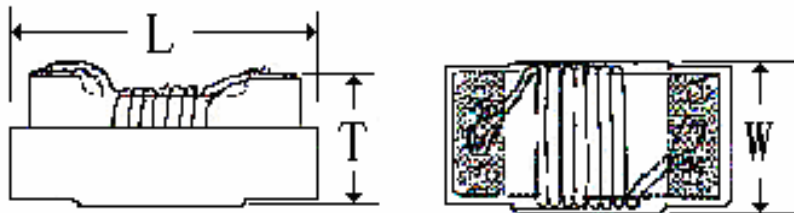
APPROVED BY	CHECKED BY	DRAFT
罗海玲	曾凡强	钟少芳

CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 4 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

### 5. TEST DATA FOR SAMPLES

TEST ITEM	L	Q(品质系数)	DCR	L	W	T	
	( $\mu$ H)	(min)	( $\Omega$ )	(mm)	(mm)	(mm)	
CON.	7.9MHz	7.9MHz	At 25°C	1.80MAX	1.25MAX	1.20MAX	
SPEC.	4.70 $\pm$ 10%	12 MIN	1.26 MAX				
1	4.72	16.0	0.79	1.71	1.16	1.11	
2	4.69	18.0	0.81	1.69	1.15	1.13	
3	4.71	17.0	0.80	1.72	1.17	1.12	
4	4.68	16.0	0.79	1.71	1.17	1.13	
5	4.70	16.0	0.79	1.71	1.15	1.11	
6	4.69	18.0	0.81	1.69	1.16	1.13	
7	4.68	17.0	0.80	1.72	1.17	1.12	
8	4.68	16.0	0.79	1.70	1.15	1.11	
9	4.70	18.0	0.81	1.71	1.16	1.12	
10	4.71	17.0	0.80	1.69	1.17	1.13	
X	4.70	16.90	0.80	1.71	1.16	1.12	
R	0.04	2.00	0.02	0.03	0.02	0.02	

图示:

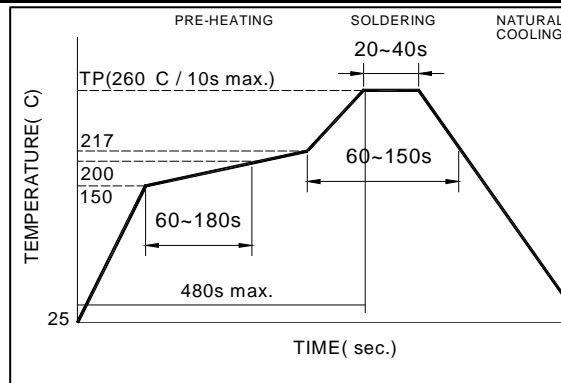


APPROVED BY	CHECKED BY	DRAFT
罗海玲	曾凡强	钟少芳

CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 5 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

## 6. SOLDERING CONDITIONS

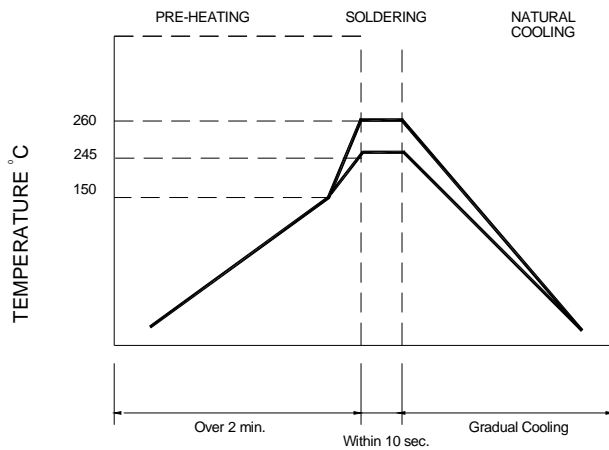
**Figure 1.  
Re-flow  
Soldering (Lead  
Free)**



Note:

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

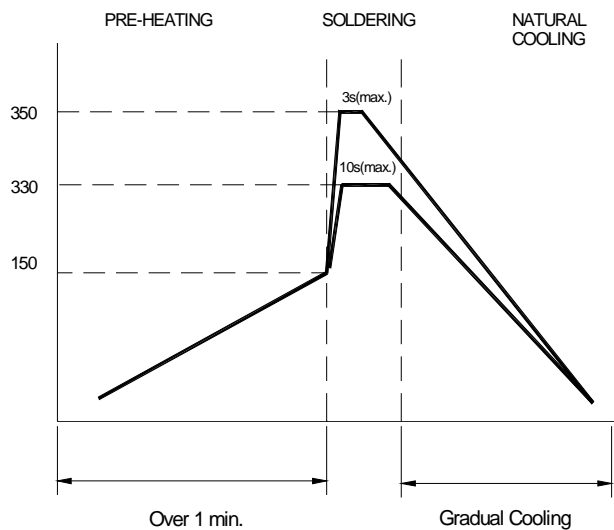
**Figure 2.  
Wave Soldering**



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.

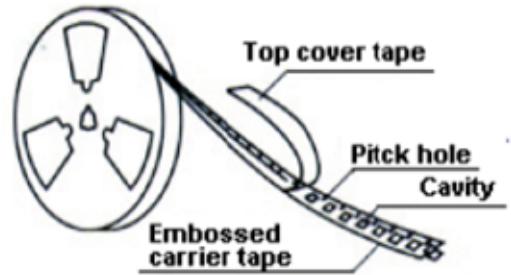
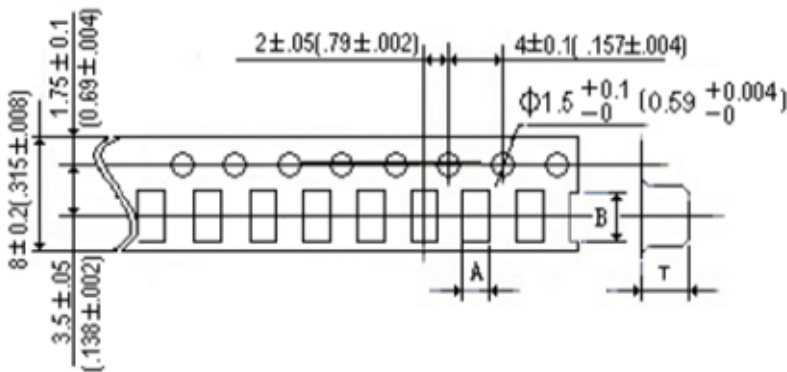
APPROVED BY	CHECKED BY	DRAWN BY
罗海玲	曾凡强	钟少芳

CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 6 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

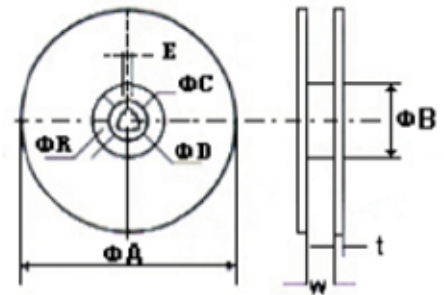
**7. PACKAGING(unit: mm)**

**Tape**

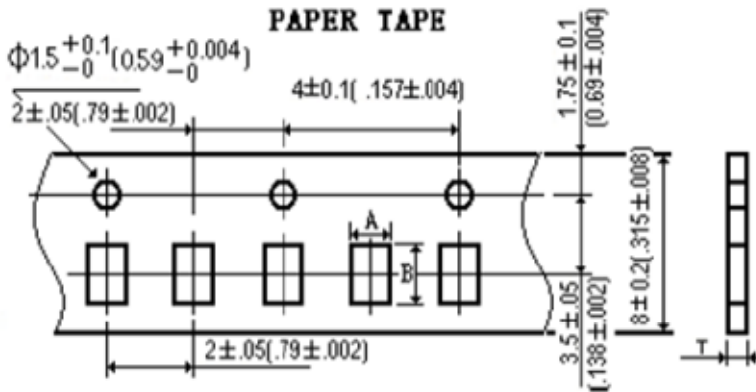
**POLYSTYRENE TAPE**



**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	

APPROVED BY	CHECKED BY	DRAFT
罗海玲	曾凡强	钟少芳

CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 7 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

### 8. 1 RELIABILITY TEST

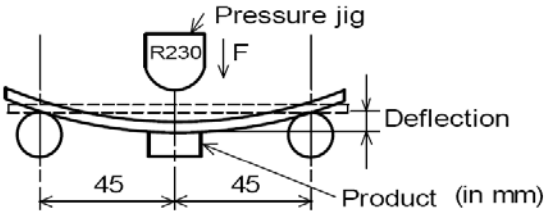
TEST ITEM	SPECIFICATION	TEST CONDITION
Rating current	According to product specifications	Current sources:33010D
Inductance	According to product specifications	Test Frequency:0.252~250MHz Test Equipment:HP4291A、HP4286A、HP4287A、HP4284A Test Fixture:16193Aor16334A
Q	According to product specifications	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

APPROVED BY	CHECKED BY	DRAFT
罗海玲	曾凡强	钟少芳



CUSTOMER:		REV NO:	A1.0
DESCRIPTION:	WIRE WOUND CHIP INDUCTOR	PAGE NO:	PAGE 8 OF 8
PART NO:	KPS0603LD4R7KST	SN.	
CUSTOMER NO:		DATE:	2018年11月17日

## 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: $96\pm 2$ 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: $96\pm 2$ 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: $5\pm 1$ 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

APPROVED BY	CHECKED BY	DRAFT
罗海玲	曾凡强	钟少芳