LUCKI CM ELECTRONICS Co.,Ltd

APPROVAL SHEET

Customer :

Part Number: 2520 Seam Sealing Crystal

LK Part No.: L225S320H11

Holder : SMD 2520

Frequency: 32.000MHZ 10PF ±10PPM

Manufacturer: Lucki Electronics

Date: 2023-05-22

Prepared	Checked	Approved
Zhao Qian	Zhang Dongwei	Zhang Bin

(For Customer Use)

Acceptable	

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Revision History

No.	Revised Date	Change Content	Approved	Remark

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1.Electrical characteristics

Items	Symbol	Specification			Unit	Notes
		Min	Typ	Max		
Model No		Seam Seal 2520				
Blank Cutting Mode		AT FUND				
Nominal Frequency	F0	32.000000			MHz	
Oscillation Mode		■Fundamental		□3rd		
Frequency Tolerance	△F/F0	-10		10	ppm	25℃±3℃
Load Capacitance	CL		10		pF	
Frequency Stability	TC	-10		10	ppm	
Operating Temperature	Topr	-20		75	℃	
Storage Temperature	Tstg	-55	~	125	℃	
Drive Level	DL		100	300	uW	
Effective Resistance RR	Rr	-	-	40	Ω	
Shunt Capacitance C0	C0	-	-	2	pF	
Trim Sensitivity TS	TS	-		-	ppm/PF	
Insulation Resistance	IR	500	-	-	MΩ	at DC 100 V
Aging:	Fa	-2		2	ppm	Per year
Weight			0.0125		g	

Remark: Sample Data See Attachment

Measure equipment :

Electrical characteristics measured by S&A 250B or equivalent.

Hermetically :

Fine Leak: Helium Bombing 4kg/cm^{2}for 1 Hour, Leak ate Less Than $^{-8}$atm. cc/sec 1×10

Gross Leak: 125℃ FC#40 , 120 Seconds, No Bubble

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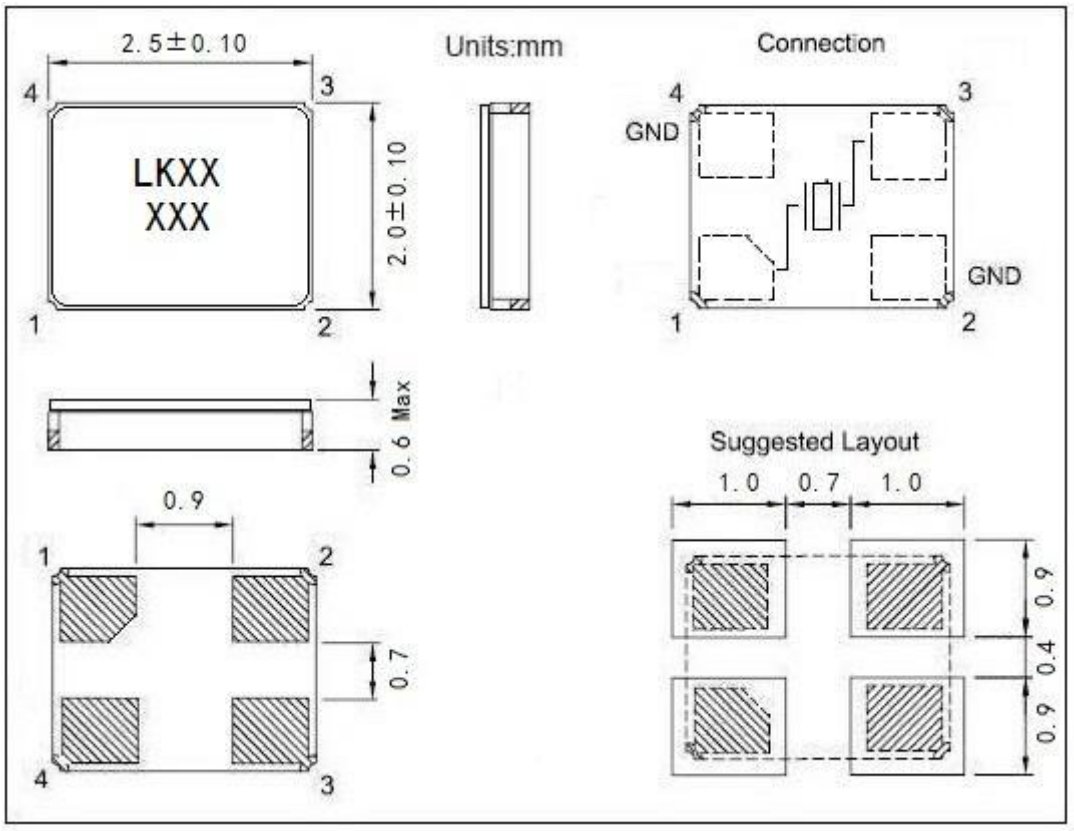
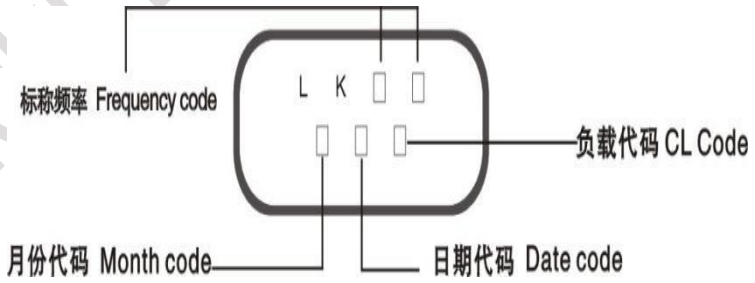
2.Solder Dimension And Pattern



3. Marking specification



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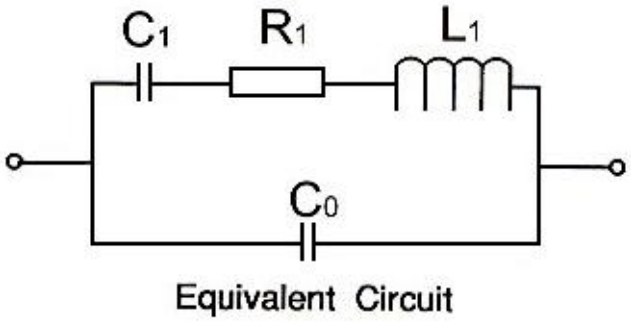
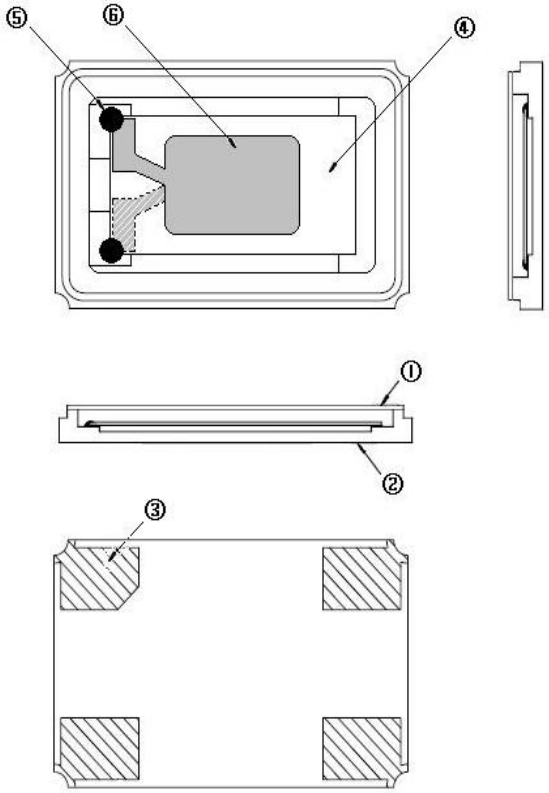
4. Equivalent Circuit



Equivalent Circuit

5. Structure drawing



NO	COMPONENTS	MATERIALS	QTY	FINISH / SPECIFICATIONS
1	Cap	Metal (Fe)	1	-
2	Base	Ceramic	1	Color black
3	PAD	Au	4	Tungsten metalize + Ni plating + Au plating
4	Crystal Blank	SiO_2	1	-
5	Conductive Adhesive	Ag	4	Silicone
6	Electrode	Ag + Cr	2	-

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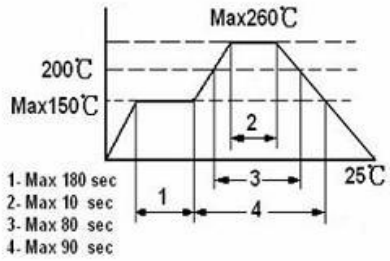
6.Reliability Specification

	Item	Condition	Standard
1.	Drop charact eristics	Free drop from 100cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)	Frequency change:≤±5ppm Rr as specification
2	Mechanical shock	Device are shocked to hal f sine wave (1000g) three mutually perpendicular axes each 3 times	Frequency change:≤±5ppm Rr as specification
3.	Shake ch aracteristics	Shake freq uency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after2 h ours.	Frequency change:≤±5ppm Rr as specification
4.	Humidity ch aracteristics	+40±2℃ & 90%~95% R.H. 250 hours	Frequency change:≤±5ppm Rr as specification
5.	Low temperature ch aracteristics	-40±2℃, 25 0 hours, put in room temperature, test after 1 h ours.	Frequency change:≤±5ppm Rr as specification
6.	High temperature ch aracteristics	+85±2℃, 250 hours, put i n room temperature, test after 1 h ours.	Frequency change:≤±5ppm Rr as specification
7.	Temperature cycling	-30±3℃/30±3 min~+85±2℃/30±3min, 5 cycles	Frequency change:≤±5ppm Rr as specification
8.	Refluence ex amination		Frequency change:≤±5ppm Rr as specification

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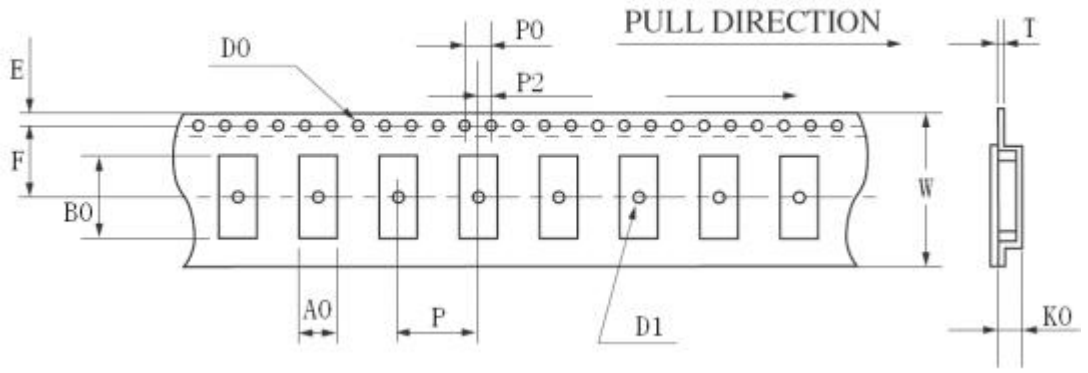
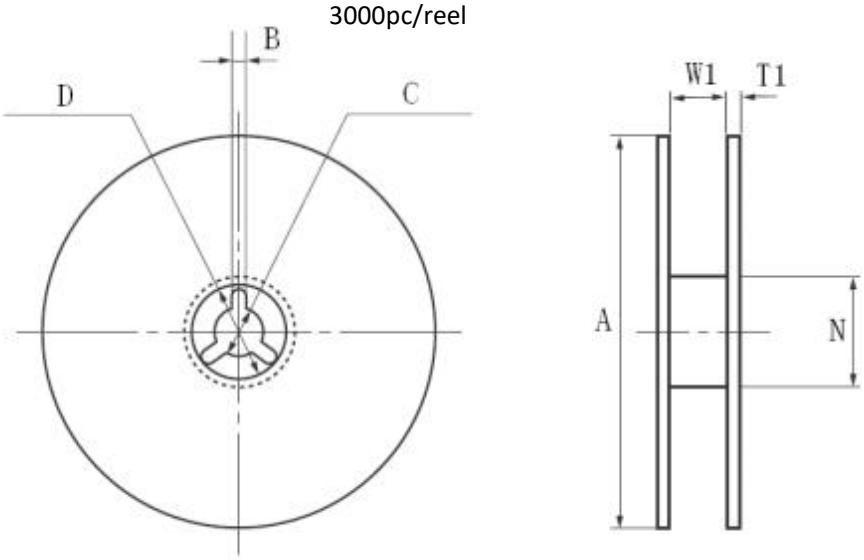
7. Type & Reel

	HC-49SMD	7050	6035	5032	3225	2520	2016
W	24.00±0.30	16.00±0.05	12.00±0.05	12.00±0.05	8.00±0.05	8.00±0.05	8.00±0.05
E	1.75±0.10	1.75±0.10	1.75± 0.10	1.75± 0.10	1.75± 0.10	1.75±0.10	1.75±0.10
F	11.5±0.10	7.5±0.10	5.5± 0.10	5.5± 0.10	3.5± 0.05	3.5±0.05	3.5±0.05
T	0.40±0.05	0.35±0.05	0.35± 0.05	0.30± 0.05	0.25± 0.03	0.25±0.03	0.25±0.03
P	12.00±0.10	8.00±0.10	8.00± 0.10	8.00± 0.10	4.00± 0.05	4.00±0.05	4.00±0.05
P0	4.00±0.10	4.00±0.10	4.00± 0.10	4.00± 0.10	4.00± 0.05	4.00±0.05	4.00±0.05
P2	2.00±0.10	2.00±0.10	2.00± 0.10	2.00± 0.10	2.00± 0.05	2.00±0.05	2.00±0.05
D0	φ1.50+0.10	φ1.50+0.10	φ1.50+0.10	φ1.50+0.10	φ1.50+0.10	φ1.50+0.10	φ1.50+0.10
D1	φ1.50MIN	φ1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.00MIN	φ 1.00MIN	φ 1.00MIN
A0	4.60±0.10	5.40±0.10	3.90± 0.10	3.50± 0.10	2.70± 0.10	2.4±0.10	2.00±0.10
K0	4.40±0.10	1.80±0.10	1.50± 0.10	1.60± 0.10	1.50± 0.10	1.10±0.10	1.10±0.10
B0	14.20±0.15	7.40±0.10	6.40± 0.10	5.20± 0.10	3.50± 0.05	2.90±0.05	2.4±0.05



3000pc/reel



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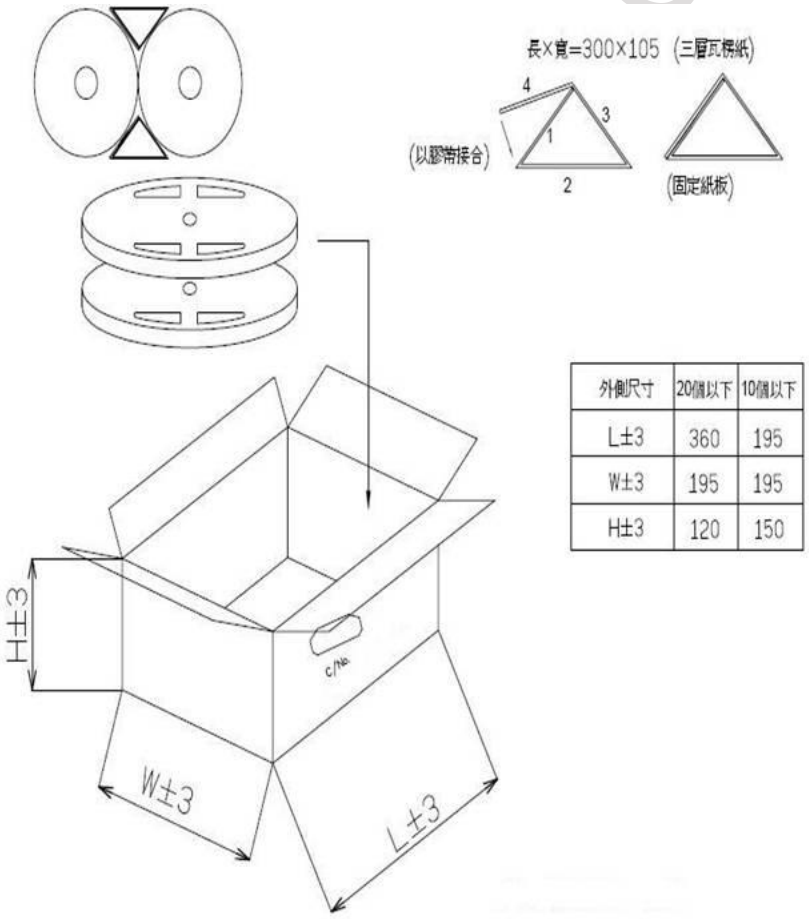
	HC-49SMD	7050	6035	5032	3225	2520	2016
A	φ330±1.0	φ178±2.0	φ178±2.0	φ178±2.0	φ178± 2.0	φ178± 2.0	φ178± 2.0
B	2.30± 0.20	2.00± 0.50	2.00± 0.50	2.00±0.50	2.50±0.50	2.50±0.50	2.50±0.50
C	φ13.5±0.20	φ13.2±0.20	φ13.2±0.20	φ13.2±0.20	φ13.5± 0.20	φ13.5± 0.20	φ13.5± 0.20
D	φ21.5±0.20	φ20.0±0.50	φ20.0±0.50	φ20.0±0.50	φ56.8± 0.50	φ56.8± 0.50	φ56.8± 0.50
N	φ100.0±0.5	φ60.5± 1.0	φ60.5± 1.0	φ60.5± 1.0	φ60.5±1.0	φ60.5±1.0	φ60.5±1.0
W1	24.5± 0.20	16.5± 0.20	12.5± 0.20	12.5±0.20	9.4±0.30	8.0±0.30	8.0±0.30
T1	2.30± 0.20	1.80± 0.20	1.80± 0.20	1.80±0.20	1.40±0.20	1.40±0.20	1.40±0.20

8. Packing Specification



外側尺寸	20個以下	10個以下
L±3	360	195
W±3	195	195
H±3	120	150