



南京中电熊猫晶体科技有限公司

NANJING CHINA ELECTRONICS PANDA CRYSTAL TECHNOLOGY CORPORATION

## SPECIFICATION

Product Name	Ceramic Surface Mount Oscillator
P/N	LH-3-5-155.52M-25-4085-P-FA
Customer's Name	
Customer's P/N	
Lot NO.	
Specification Sheet #	SLH-0256
Date	2022/7/18
Generation	Zhumengjing
Approval	Lipo
Customer Confirmation	



Tel: 0086-25-85238371  
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[HTTP:// www.cecxtal.com](http://www.cecxtal.com)



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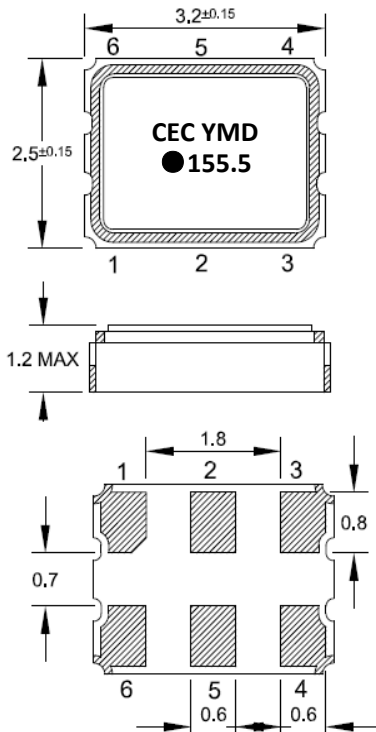
Specifications of Oscillator

NO: SLH-0256

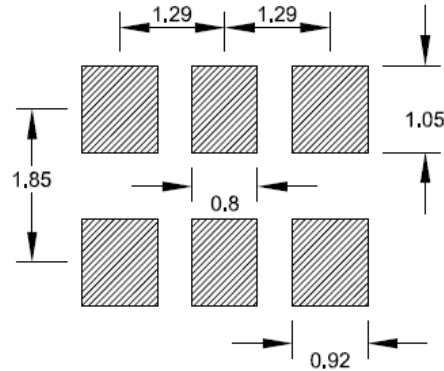
3.2x2.5 PECL Oscillator

DATE: 2022/7/18

**DIMENSION AND MARKING**



Recommended Land Pattern



PIN	FUNCTION
1	OE
2	N/C
3	Ground
4	Output
5	Output_N
6	Vdd

OE=High( $V_{IH}>0.7V_{DD}$ )/Open: Specified frequency output  
 OE=Low( $V_{IL}<0.3V_{DD}$ ): Output is high impedance

**Marking Definitions**

CEC: Logo  
 Y: Year the last digit of year (1,2021;2,2022...)  
 M: Month A,B,C,D,E,F,G,H,J,K,L,M  
 D: Date code ( A,B,C,D,E,F...Y,Z,a,b,c,d,e)  
 ●1 # PIN  
 UNIT:mm

**ELECTRICAL SPECIFICATION**

ELECTRICAL SPECIFICATION	MIN	TYP	MAX	UNIT	Test Condition
P/N	LH-3-5-155.52M-25-4085-P-FA				
Nominal Frequency	155.520000			MHz	
Output	LVPECL				
Operating Voltage	2.97	3.3	3.63	V	
Operating Temperature Range	-40	-	85	°C	
Storage Temperature Range	-55	-	125	°C	
Output Load Condition	50			ohms	Supply Vdd-2V to end point
Frequency Stability over Operating Temperature	-25	-	25	ppm	Includes @+25°C, Operating Temperature, Input Voltage Change, Load Change, Aging, Shock and Vibration
Current Consumption	-	-	80	mA	
Duty Cycle	45	-	55	%	
T-Rise	-	-	0.5	ns	20% ~ 80% Vdd
T-Fall	-	-	0.5	ns	20% ~ 80% Vdd
Start-up Time	-	-	10	ms	
RMS Phase Jitter	-	-	0.2	ps	12KHz~20MHz
High Output Voltage	-	2.35	-	V	
Low Output Voltage	-	1.6	-	V	
Aging	-3	-	3	ppm	per year
Other	Tape & Reel				
Note					

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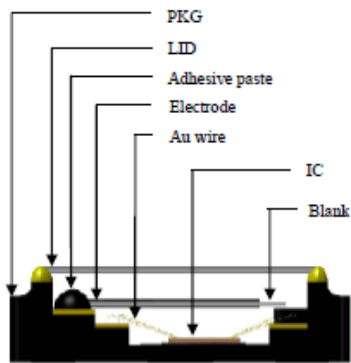
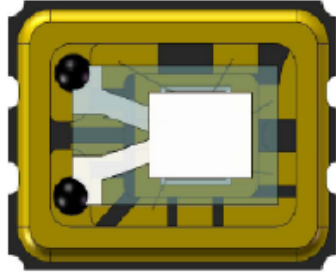
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INTERNAL STRUCTURE

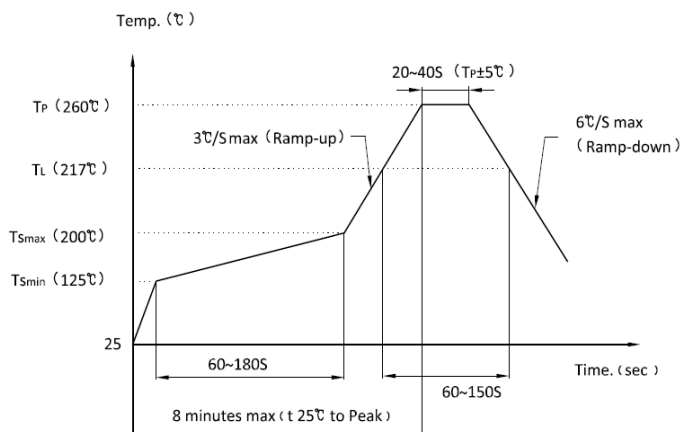


NO.	PART	MATERIAL
1	PKG	AL <sub>2</sub> O <sub>3</sub>
2	LID	KOVAR(Fe+Co+Ni alloy)
3	Adhesive paste	Ag/Silicon
4	Electrode	Noble metal
5	Blank	SiO <sub>2</sub>
6	IC	Silicon
7	Au wire	Gold

Moisture Sensitivity Level:

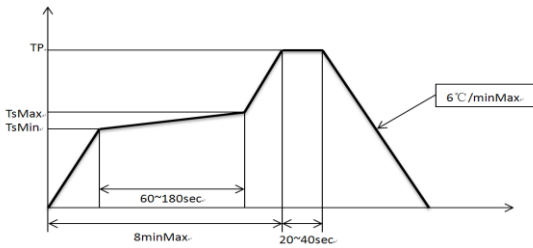
1 Level (J-STD-033)

Suggested Reflow Profiles



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**RELIABILITY TEST**

NO	ITEM	CONDITIONS	BASIS OF VERDICT
1	HIGH TEMPERATURE STORAGE	Temperature : 85°C Times : 1000 hours The test was conducted 24 ±2 hours at the end of the test(nocharge)	ΔFL=±10 ppm MAX
2	CONSTANT HUMIDITY	Temperature : 85°C±2°C ; Humidity: 85%; Time: 1000 hours The test was conducted 24 ±2 hours at the end of the test	ΔFL=±10 ppm MAX
3	AGING	Temperature : 85°C ;Time : 1000 hours, rated VDD applied The test was conducted 24 ±2 hours at the end of the test	ΔFL=±10 ppm MAX
4	LOW TEMPERATURE STORAGE	Temperature : -40°C Time : 1000 hours The test was conducted 24 ±2 hours at the end of the test	ΔFL=±10 ppm MAX
5	TEMPERATURE CYCLING	-55°C±2°C (5 min) <sup>5 min</sup> ↔ 125°C±2°C (5 min) ; For 1000 cycles Maximum conversion time : 5 min High/Low temperature holding time : 30 min	ΔFL=±10 ppm MAX
6	DROP	Height : 1m ; 3 times	ΔFL=±5 ppm MAX
7	MECHANICAL SHOCK	Peak : 100g's Duration : 6ms Waveform : Half-sine Velocity Change : 12.3 ft / sec Direction : +X, -X, +Y, -Y, +Z, -Z 3 times/direction Conduct electrical performance tests	ΔFL=±5 ppm MAX
8	VIBRATION	Frequency : 10~2000Hz: Acceleration: 5g/s Direction : X, Y, Z Duration : 20min/direction. Times : 12 times	ΔFL=±5 ppm MAX
9	WELDING HEAT RESISTANT	 <p>TP : 260°C Max TsMax : 200°C TsMin : 150°C CYCLE TIME : 2 times</p>	ΔFL=±5 ppm MAX Good Appearance
10	SOLDER	Pretreatment before test : 155°C high-temperature store 4 hours Temperature : 260°C±5°C , immersion	Solder Coverage ≥95%
11	TERMINAL STRENGTH	1.8kg of the tangential thrust (60 s) 1.8kg of the perpendicular tension (60 s)	No Rupture Observed

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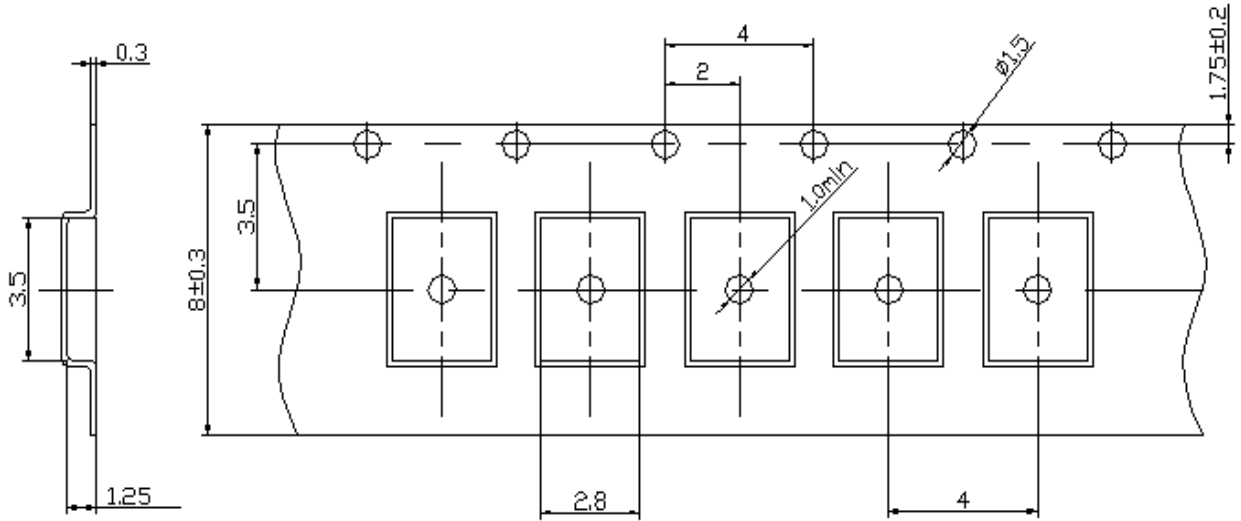
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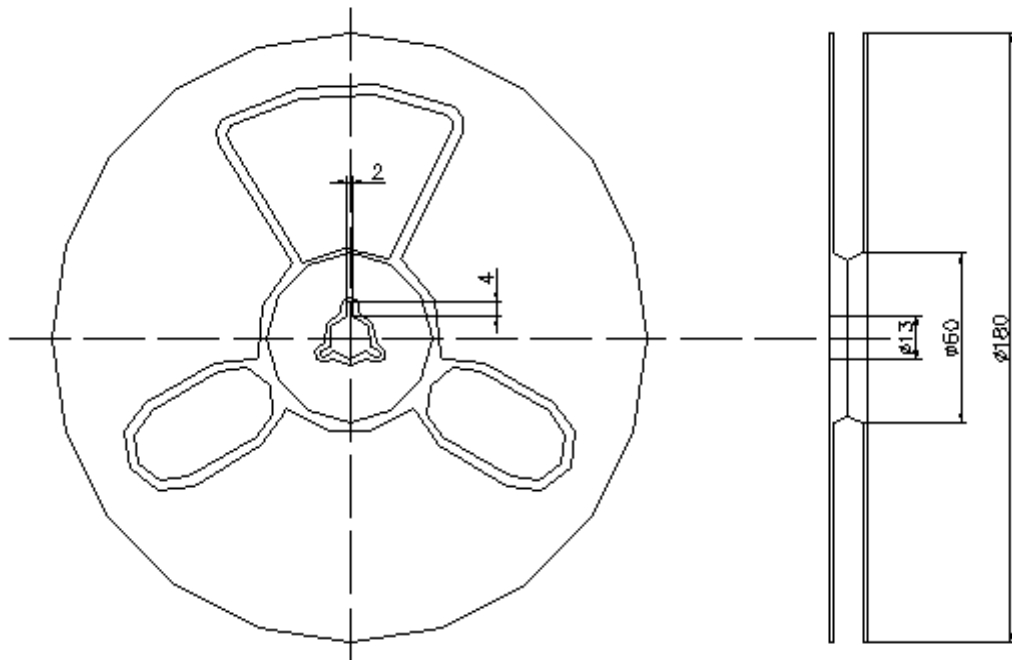
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■ TAPE



■ REEL



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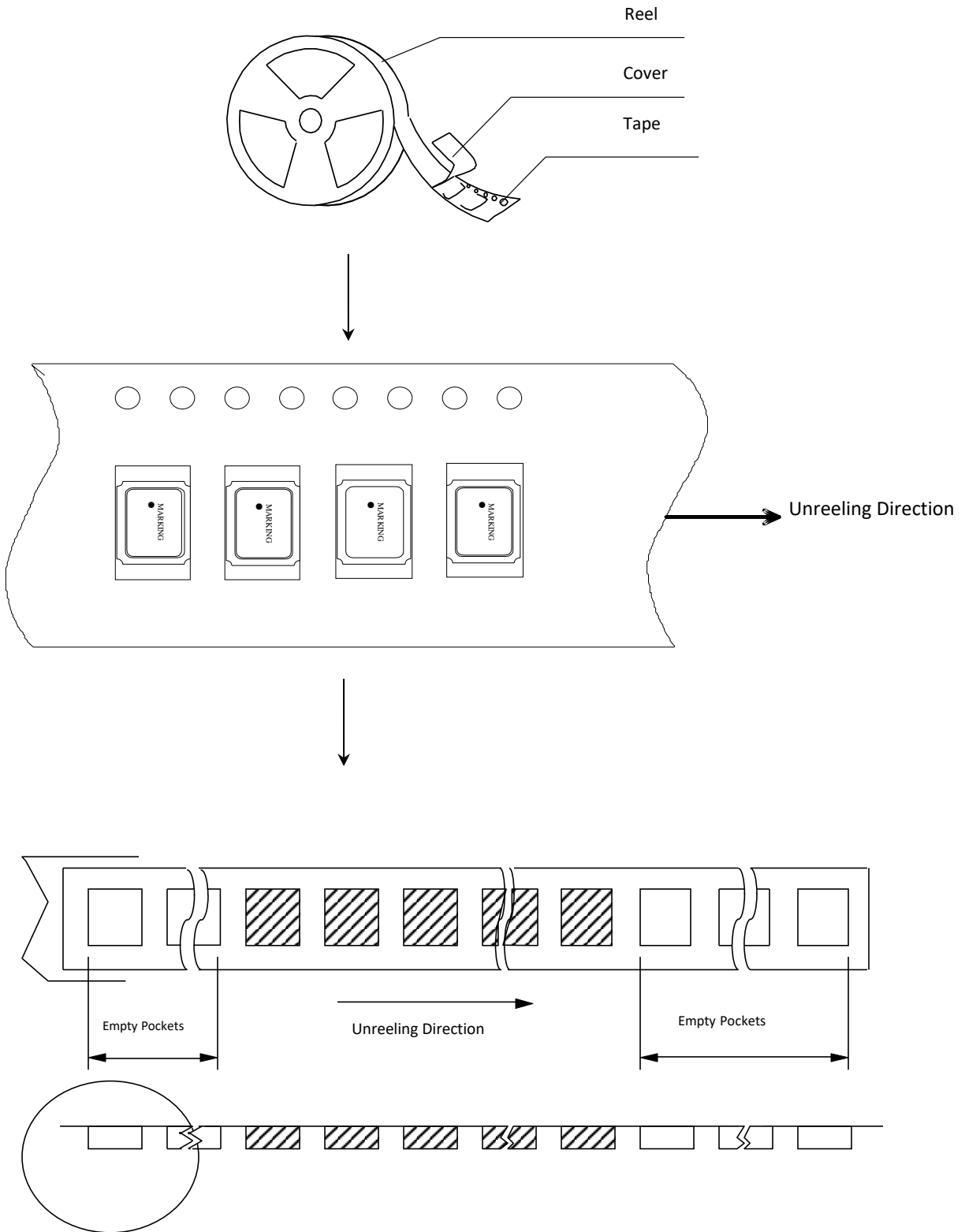
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■ TAPING METHOD



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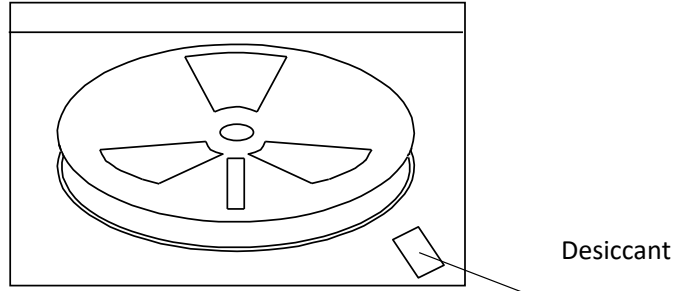
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■ PACKAGE

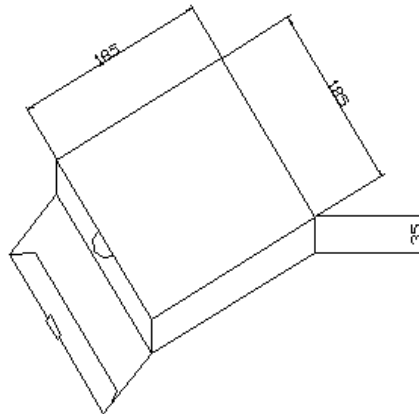
1. Bag

3000 pcs=1 Reel



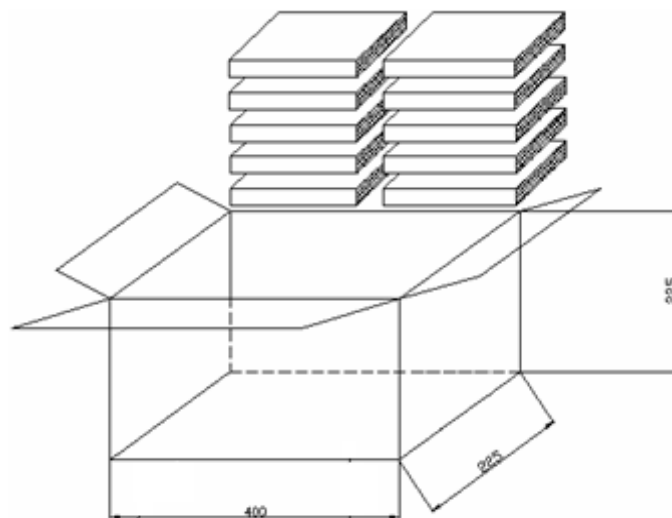
2. Inside Package

1 Reel=1 Box



3. Outside Package

10 Box=1 Carton





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**■ Warehouse Condition**

1. Temperature: -10°C~+40°C

2. Humidity: 45%~75%

3. Need Static Defense