

**P/N: WTL3L20406**

**SEAM SEALED OSCILLATOR 3.2\*2.5mm SMD**



Customer	WTL
	Approved by: XoXo Lee
	Checked by: Susan He
	Issued by: Sheryl Xia

# SPECIFICATION

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## SMD CRYSTAL OSCILLATOR

### 1. ELECTRICAL CHARACTERISTICS

Standard atmospheric conditions

Unless otherwise specified , the standard range of atmospheric conditions for making

measurement and tests are as follow :

Ambient temperature :  $25\pm 5^{\circ}\text{C}$

Relative humidity : 40%~70%

If there is any doubt about the results , measurement shall be made within the following limits : Ambient temperature :  $25\pm 3^{\circ}\text{C}$

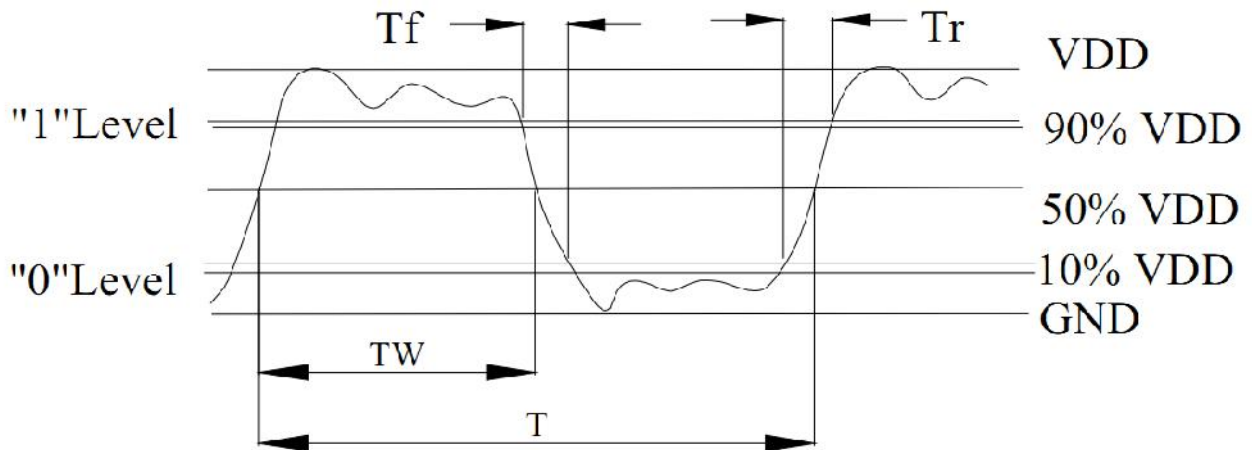
Relative humidity : 40%~70%

Cutting Model : AT CUT

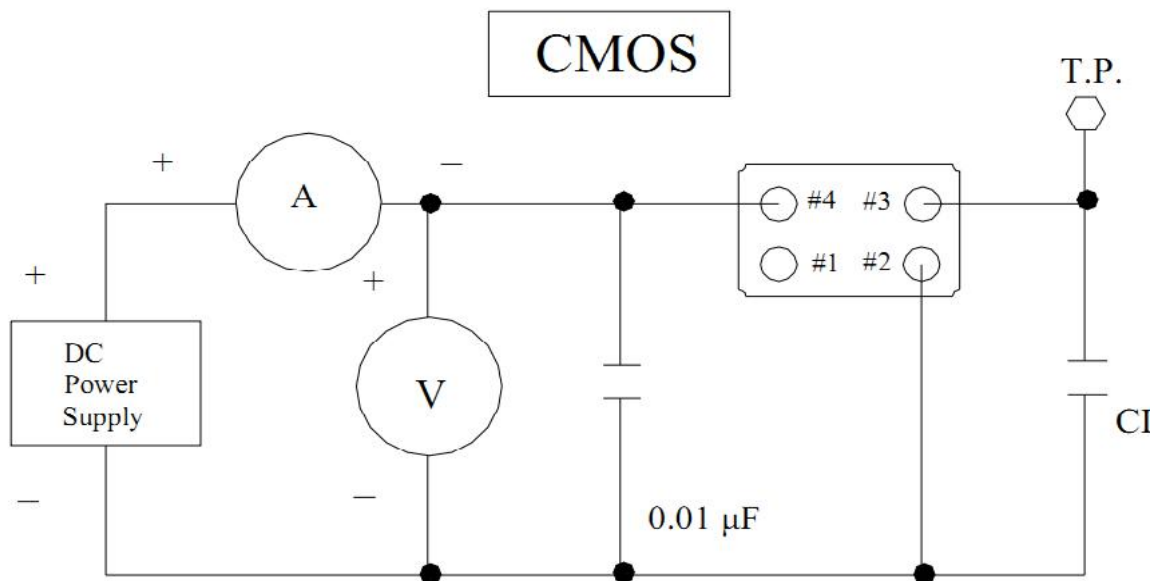


Parameters	Condition/Model	Value
Fan Out Type		CMOS
Supply Voltage		3.3v
Frequency Range		16.000MHz
Operating Temperature		-20+70°C
Input Current		25mA max
All condition		$\pm 50$ ppm
Symmetry	AT 1/2 Vdd	45/55%
Output Voltage	Vol(max)	0.33V
	VoH(min)	2.97V
Rise/Fall Time	AT 0.1Vdd~0.9Vdd	10ns max
Drive Ability	CMOS load max	15pF
Start-up Time	Load RANGE	10ms max(15pF)
E/D Function	#1 OPEN	PIN #3 ACTIVE
	#1 $\geq 2.2\text{V}$	PIN #3 ACTIVE
	#1 $\leq 0.8\text{V}$	PIN #3 INACTIVE
PAD Connection	PIN#1 E/D	PIN#3 OUT
	PIN#2 GND	PIN#4 Vdd

### 2. C - MOS LOAD OUTPUT WAVEFORM



### 3. C - MOS LOAD TEST CIRCUIT



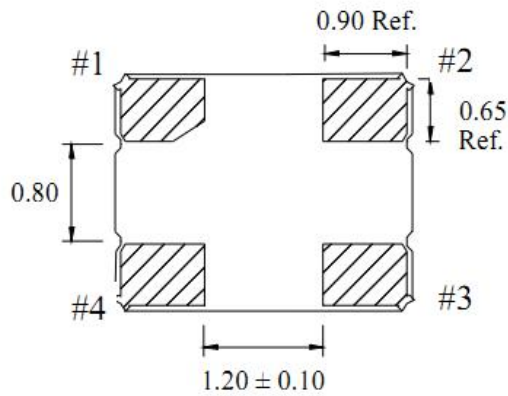
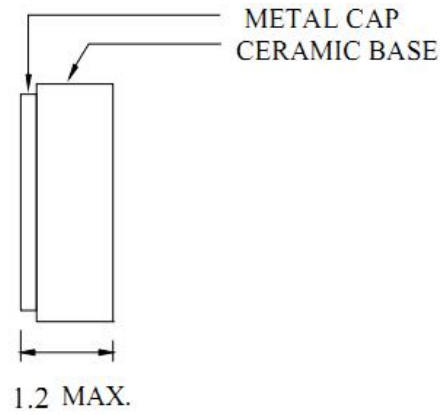
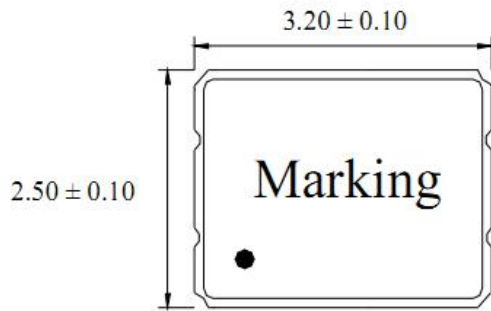
\*\*\*Because SMA series has no by pass capacitor.  
So,we recommend our customer to use capacitor 0.01  $\mu\text{F}$   
in join Vcc and GND.

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## SEAM SEALED OSCILLATOR 3.2\*2.5mm SMD

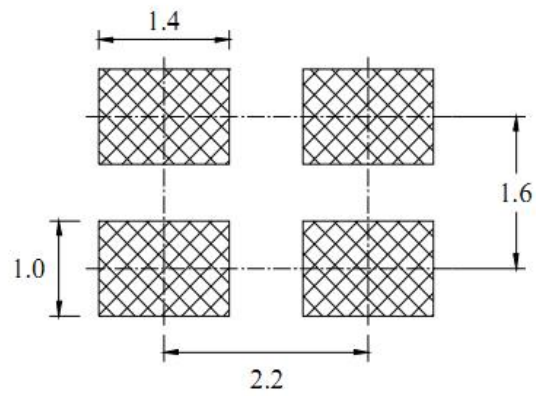
4



#1 : E/D                      #2 : GND  
 #3 : OUTPUT                #4 : VDD

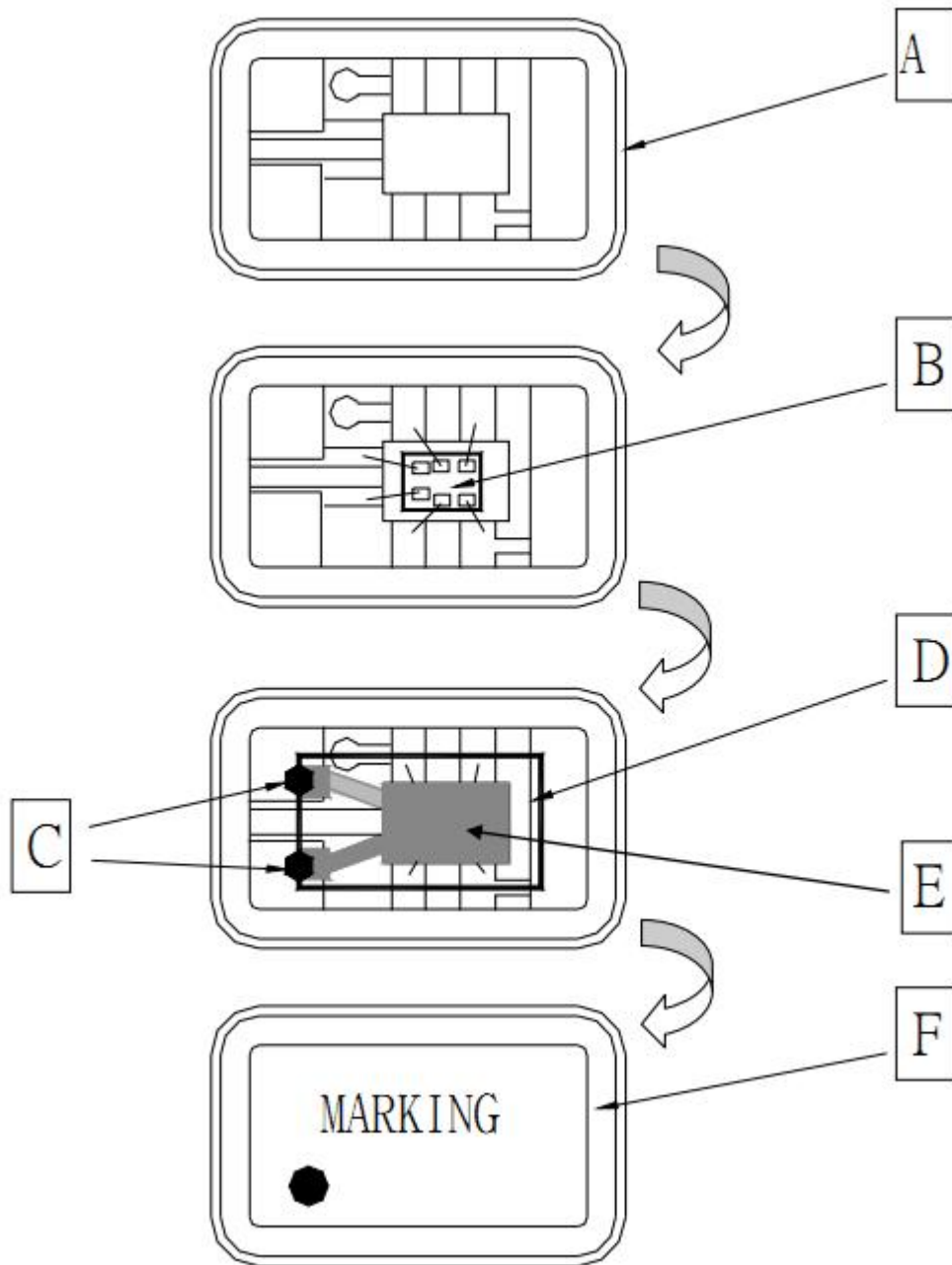
Bottom

Bottom



(Recommended Land Pattern)

### 5. STRUCTURE ILLUSTRATION



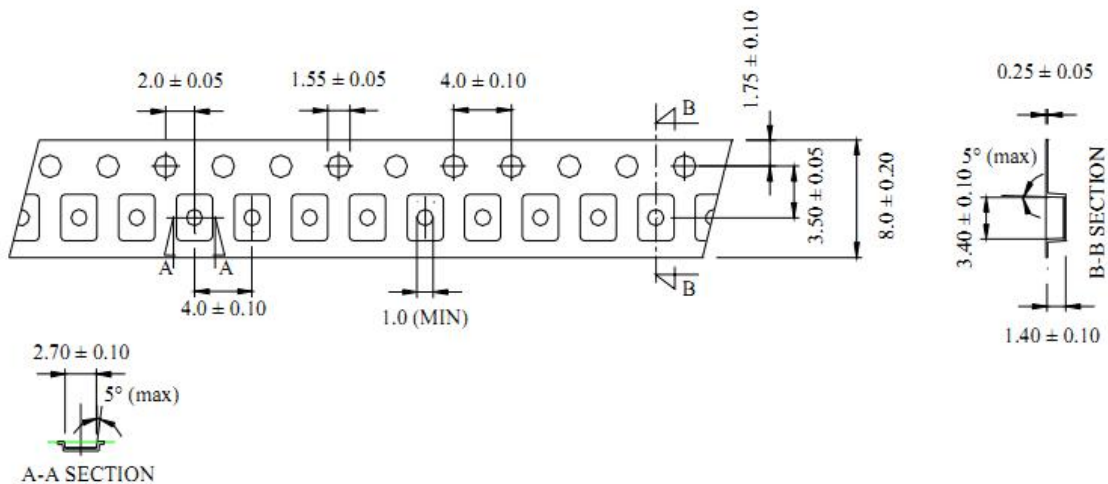
SEAM SEALED OSCILLATOR 3.2\*2.5mm SMD

COMPONENTS		MATERIALS	COMPONENTS		MATERIALS
A	Base (Package)	Ceramic (Al <sub>2</sub> O <sub>3</sub> )+Kovar (Fe/Co/Ni)	D	Crystal blank	SiO <sub>2</sub>
B	IC chip	-	E	Electrode	Cr / Ag
C	Conductive adhesive	Ag / Silicon resin	F	Lid	Fe/Co/Ni

6. PACKING

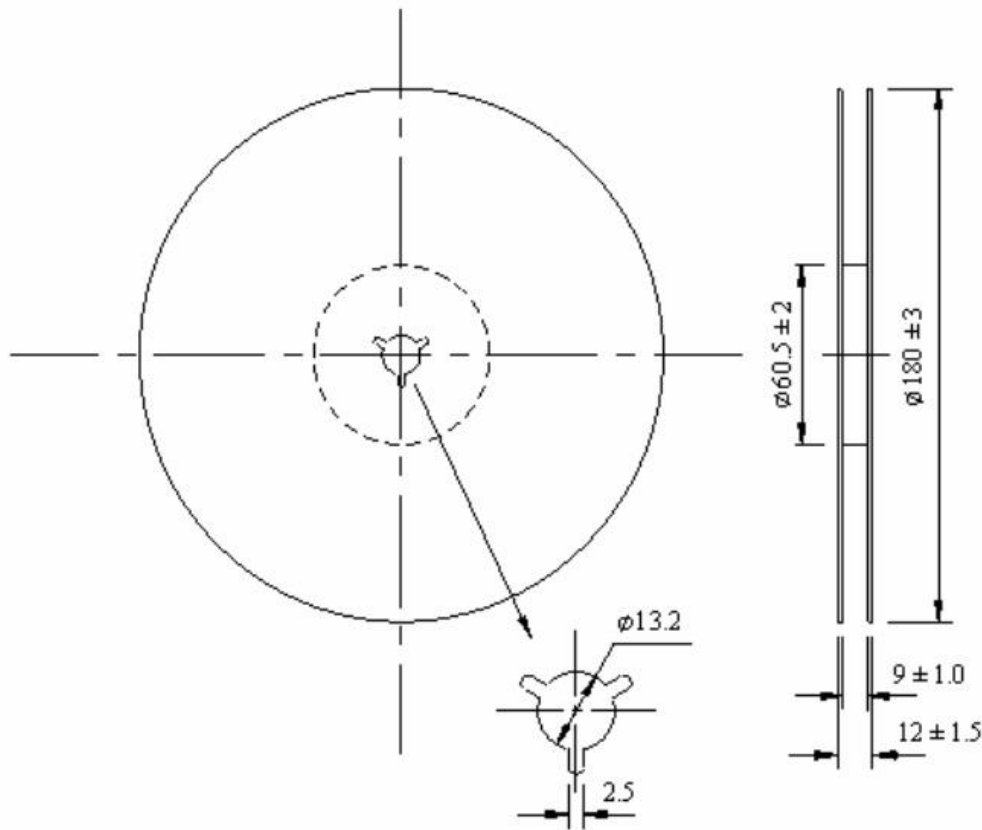
TAPE SPECIFICATION

(Unit: mm)

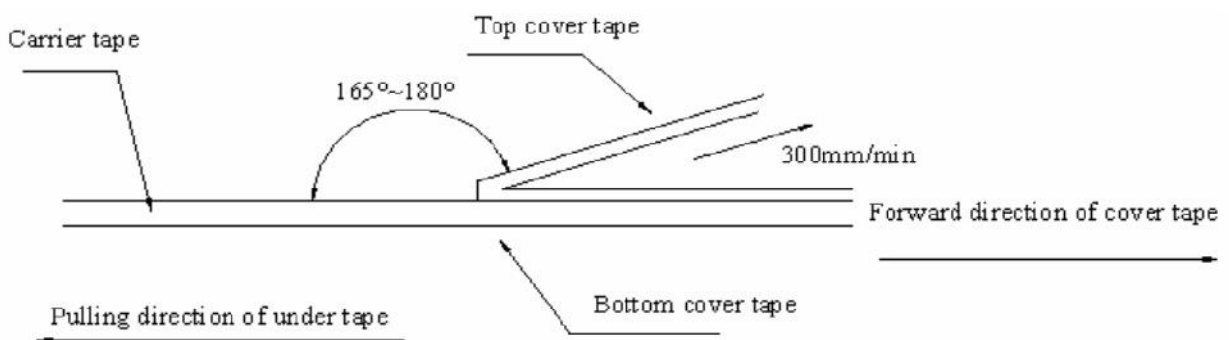


7. OUTLINE DIMENSION

(Unit: mm)



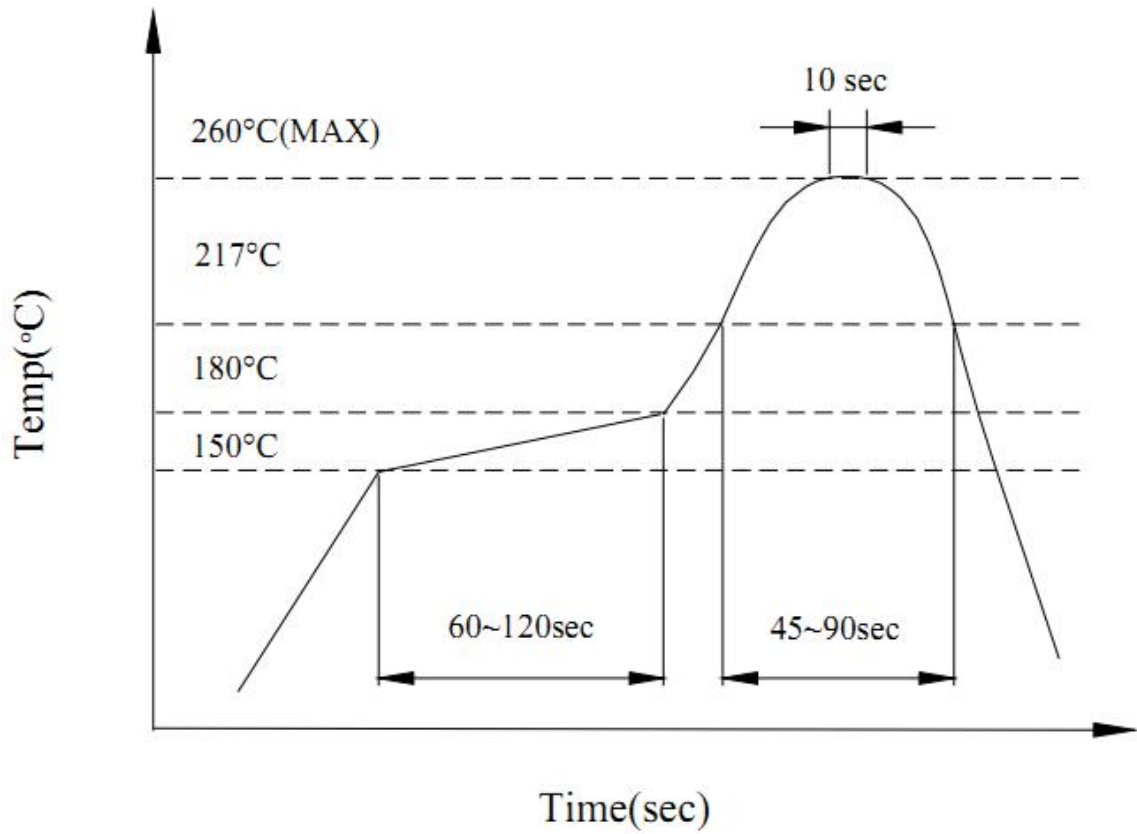
8. COVER TAPE ADHESION STRENGTH



\*\*\* In the case, the cover tape is pulled off under the above conditions, the cover tape adhesion strength should be  $10.2\text{g} \sim 71.4\text{g}$  Plastic tape:  $10.2\text{g} \sim 71.4\text{g}$

(Cover tape adhesion strength)

### 9. SOLDERING REFLOW PROFILE



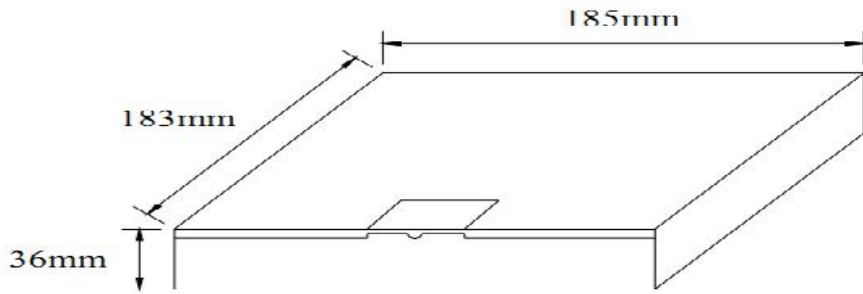


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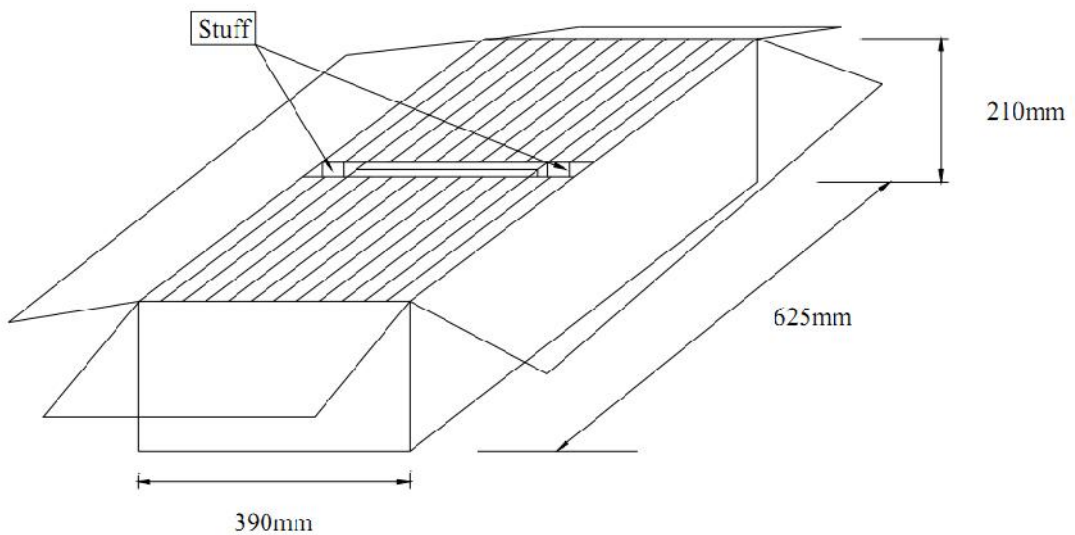


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**10. PACKING**



**PIZZA BOX = 3000 PCS / REEL(MAX)**



SMD product packs 32 BOX = The outside box packs ( 3000 PCS \* 32 BOX = 96000 PCS )(MAX)