

P/N: WTL3L10329

SEAM SEALED OSCILLATOR 3.2*2.5mm SMD



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%

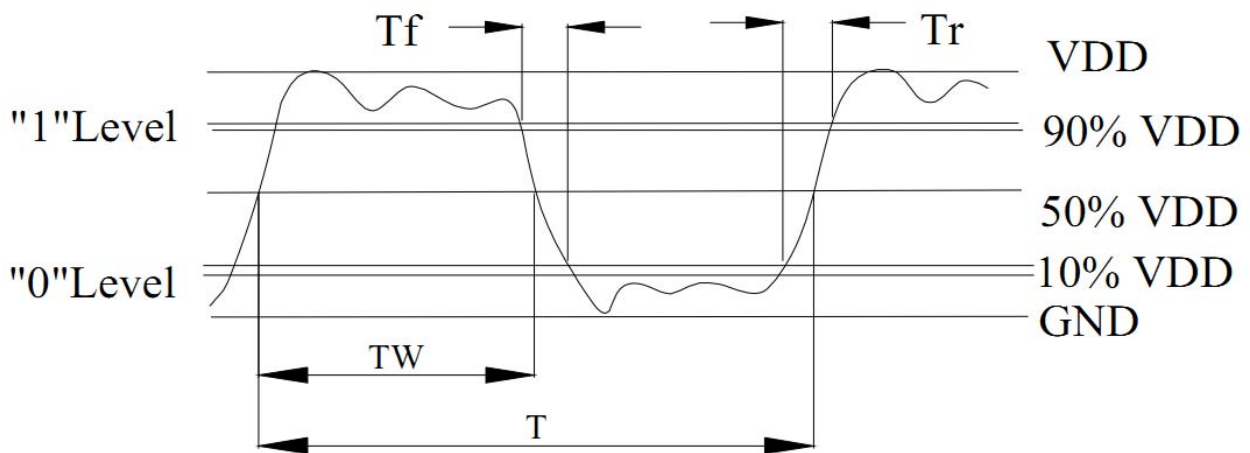
If there is any doubt about the results, measurement shall be made within the following limits : Ambient temperature : $25\pm 3^{\circ}\text{C}$

Relative humidity : 40%~70%

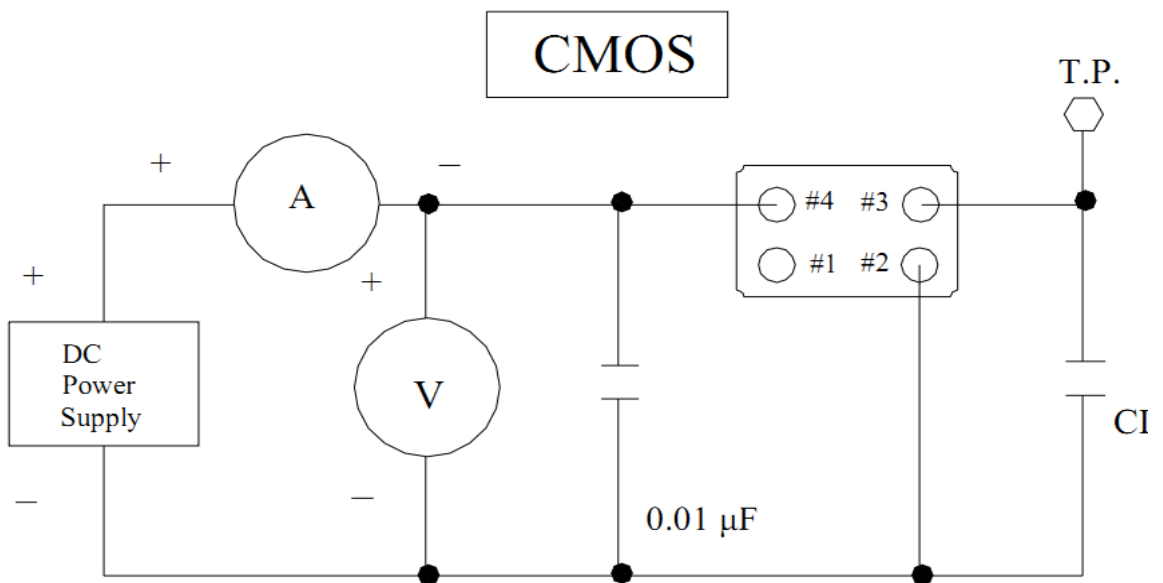
Cutting Model : AT CUT

Parameters	Condition\Model	Value
Fan Out Type		HCOMS/TTL
Supply Voltage		3.3v
Frequency Range		48.000MHz
Operating Temperature		-20+70°C
Input Current		25mA max
Frequency Stability	All Conditions	$\pm 50\text{ppm}$
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



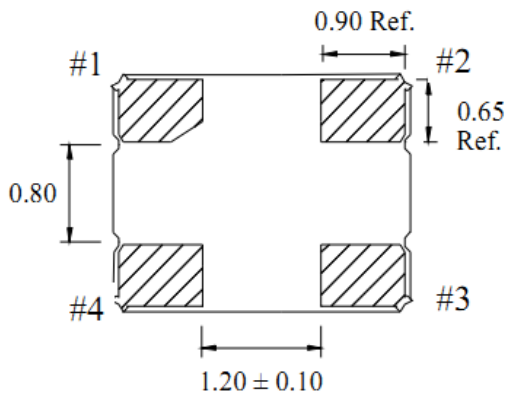
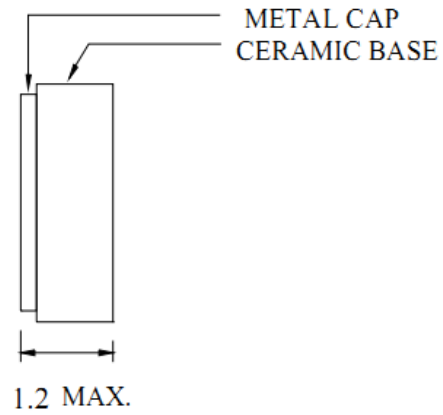
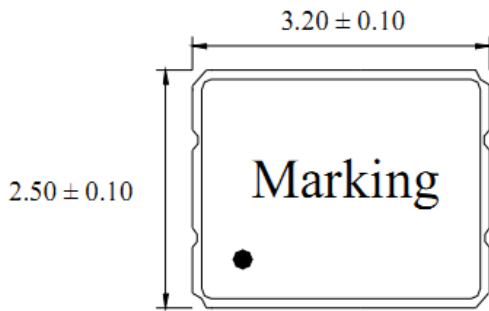
***Because SMA series has no by pass capacitor.
So,we recommend our customer to use capacitor 0.01 μF
in join Vcc and GND.

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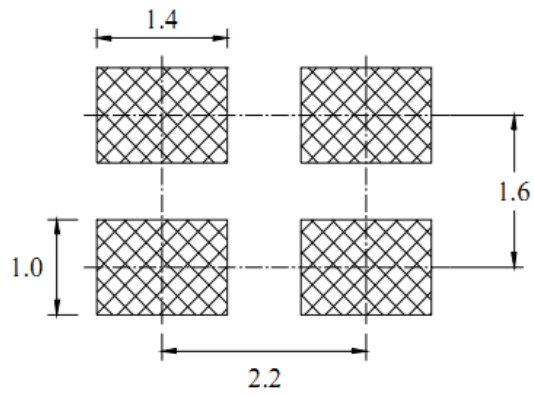
4



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

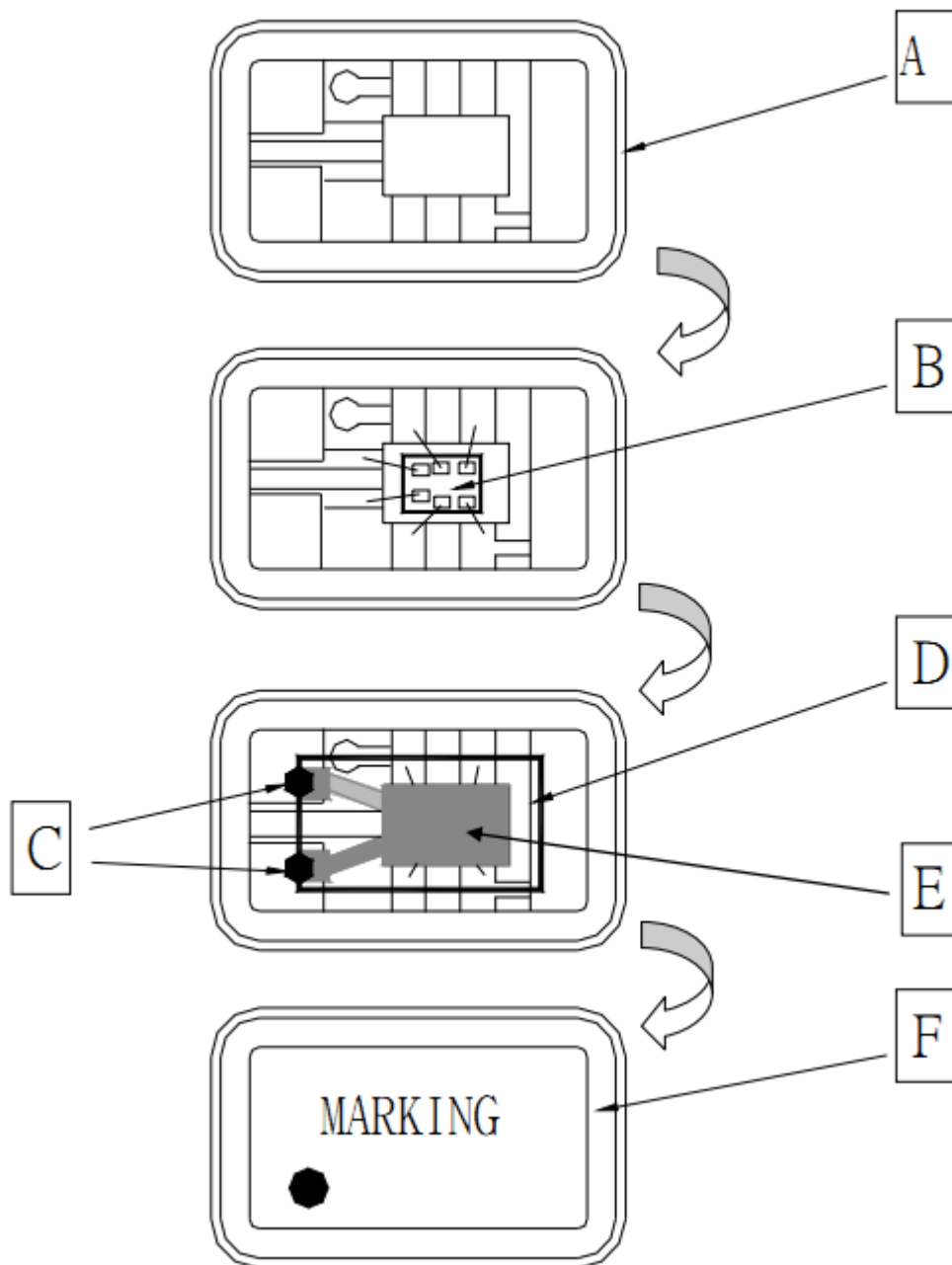
Bottom

Bottom



(Recommended Land Pattern)

5. STRUCTURE ILLUSTRATION



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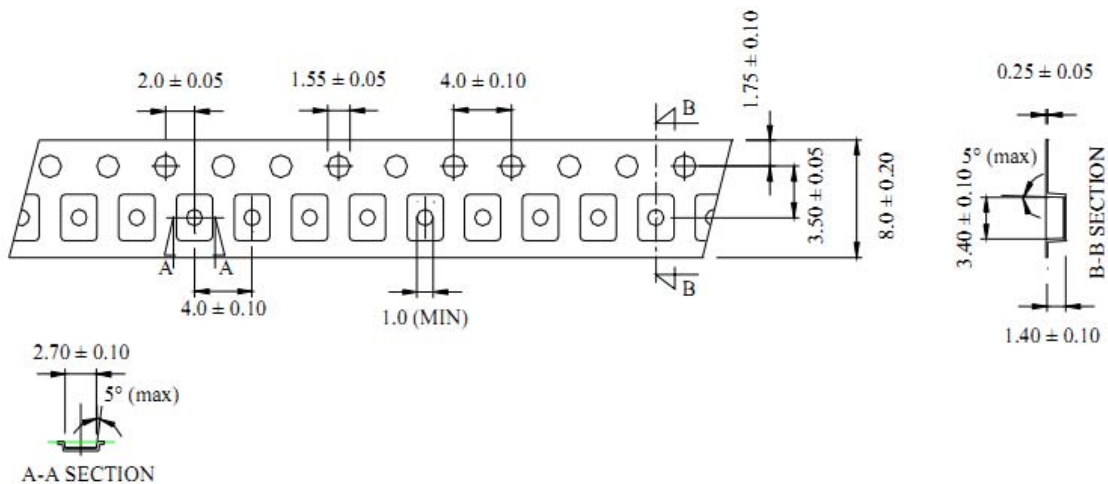
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COMPONENTS		MATERIALS	COMPONENTS		MATERIALS
A	Base (Package)	Ceramic (Al ₂ O ₃)+Kovar (Fe/Co/Ni)	D	Crystal blank	SiO ₂
B	IC chip	.	E	Electrode	Cr / Ag
C	Conductive adhesive	Ag / Silicon resin	F	Lid	Fe/Co/Ni

6. PACKING

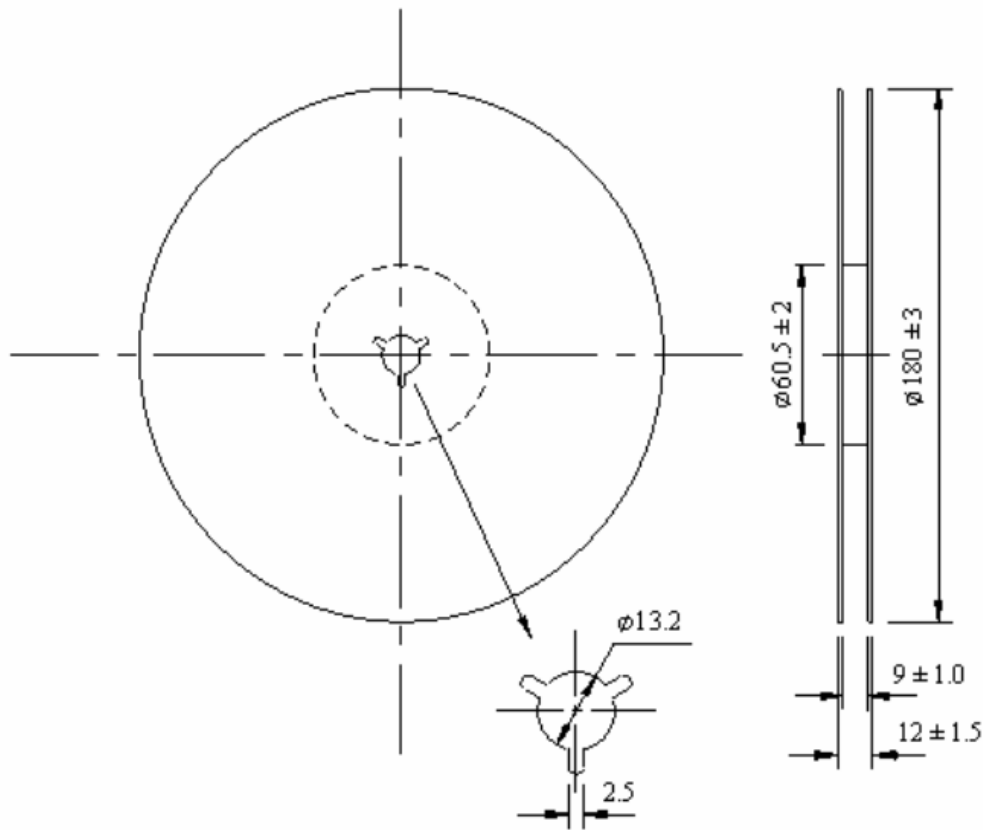
TAPE SPECIFICATION

(Unit: mm)

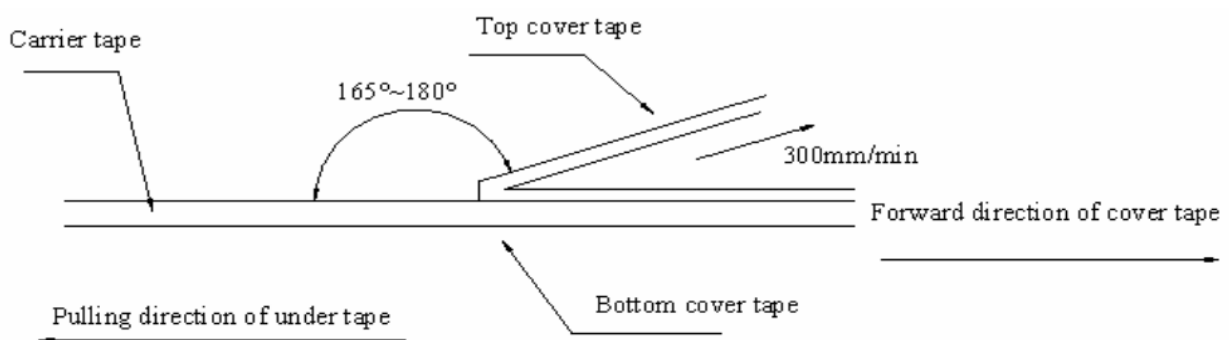


7. OUTLINE DIMENSION

(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: $10.2\text{g} \sim 71.4\text{g}$

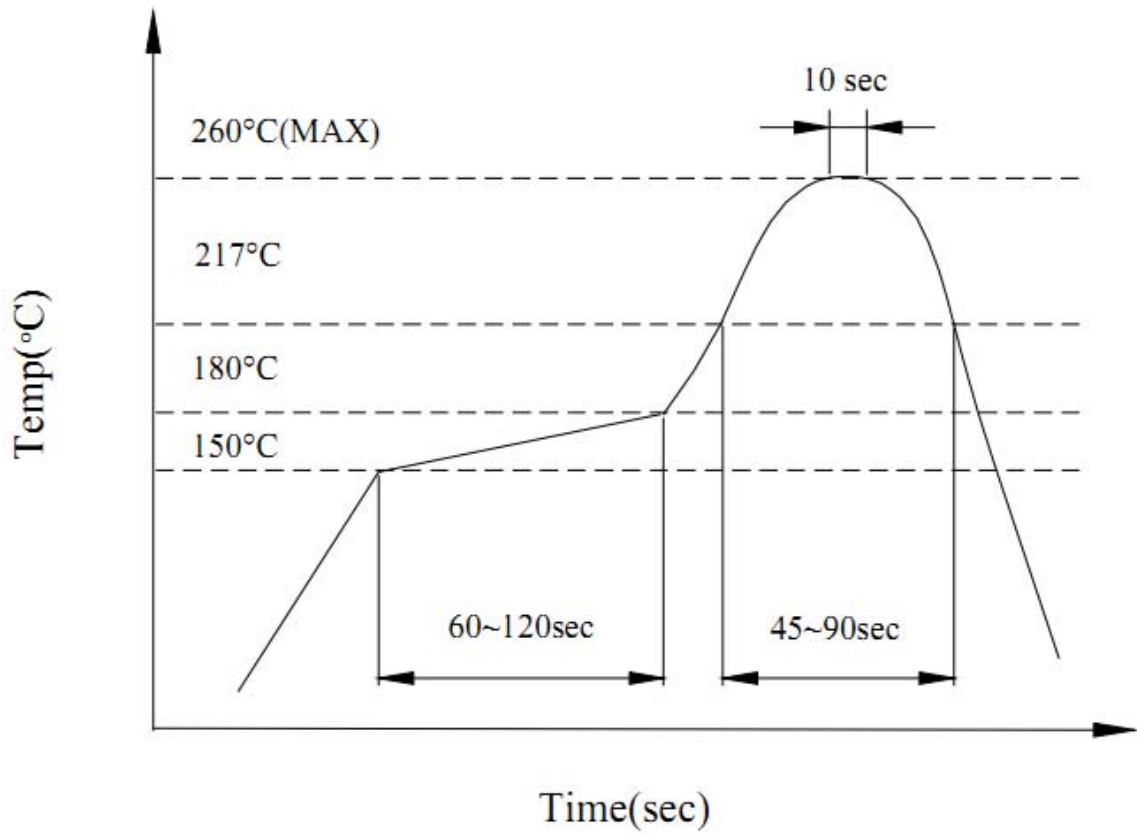
(Cover tape adhesion strength)

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9. SOLDERING REFLOW PROFILE

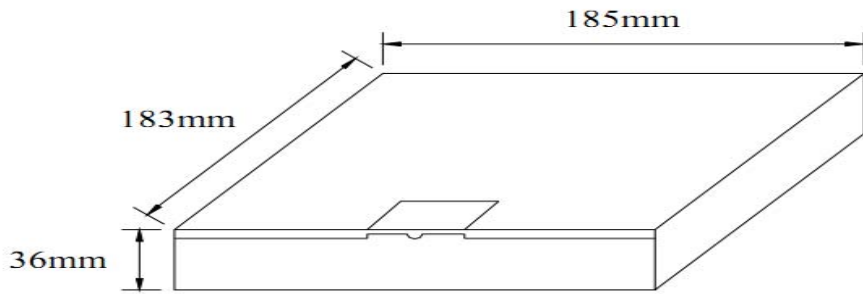


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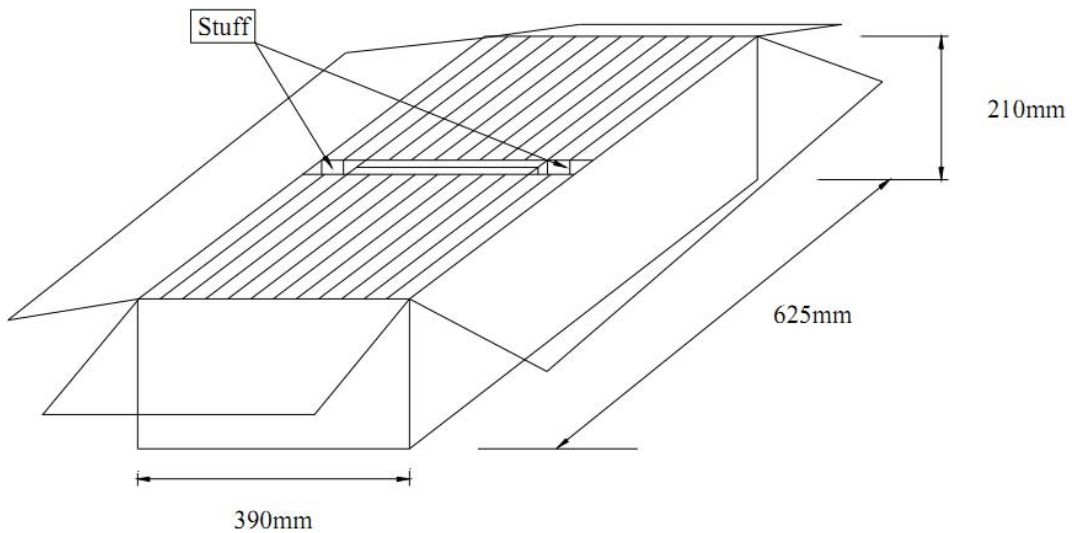
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10. PACKING



PIZZA BOX = 3000 PCS / REEL(MAX)



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