



深圳市晶光华电子有限公司

ShenZhen Jingguanghua Crystal Co.,Ltd.

承 认 书

SPECIFICATION FOR APPROVAL

客户名称: Customer 立创

货 名: Description SMD3225 XO CMOS 石英晶体振荡器

客户料号: Part No. C390802

物料编号: Code No. O3232768151850

频 率: Frequency 0.032768MHz

样品数量: Sample Quantity 10PCS

日 期: Date 2019-08-02

备 注: RoHS Compliance Directive 2011/65/EU

制作 (Prepare by)	检查 (Check by)	批准 (Approve by)
江丹娜	甘瑛	张刚

客户批准 Approve by customer	
批准日期 Approval date	

Add: 广东省深圳市华发北路桑达工业区桑达雅苑 7P

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SHENZHEN JINGGUANGHUA ELECTRONIC CO., LTD

■ Electrical characteristics

➤ Frequency

NO	Parameter	Min.	Typ.	Max.	Units	Test condition
1-1	Nominal frequency	0.032768			Mhz	
1-2	Frequency stability (overall)	-25		+25	ppm	Frequency stability includes frequency tolerance at 25 °C and frequency stability VS. overall operating temperature range and voltage variance and the first year aging
1-3	Aging	+3		-3	ppm	Frequency drift in the first year
1-4	Operating temperature range	-40		85	°C	
1-5	Storage temperature range	-55		125	°C	

➤ Power supply

NO	Parameter	Typ	Units	Test condition
2-1	Supply voltage	1.8	V	
2-2	Current	15	mA	At maximum supply voltage

➤ Output

NO	Parameter	Min.	Typ.	Max.	Units	Test condition
3-1	Output waveform	CMOS				
3-2	Duty cycle	45	50	55	%	
3-3	Start time			2.0	mSec	
3-4	Transition time: rise/fall time			4.0	nSec	
3-5	Output level	Output high(logic:1)	90%		V	
3-6		Output low (logic:0)		10%	V	
3-7	Output load			15	pF	
3-8	Tri-state	Output active	0.7 VDD		V	Pin 1 tri-state
3-9		Output in High-impedence state			0.3 VDD	V

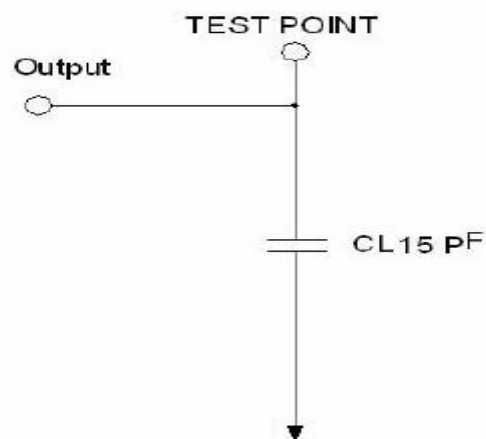
■ Customer special requirement

4	1.8V
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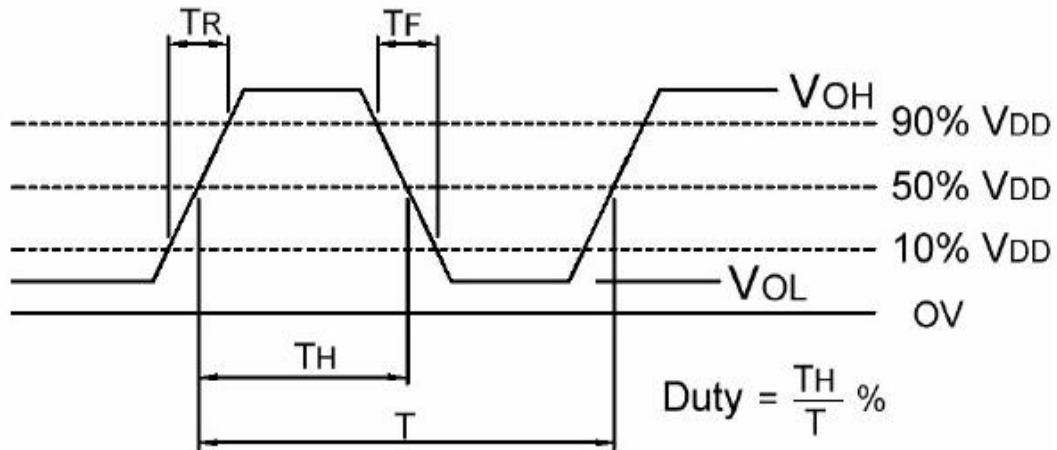
■ Environmental

NO	Parameter	Reference std.	Test condition
5-1	Vibration Test	MIL-STD-883 2007 condition A	10~2000hz,1.52mm ,20g, each axis for 4Hrs
		JESD22-B103 condition 1	
5-2	Thermal shock	MIL-STD-883 1010 condition B	-55~125℃, soak time:10mins Total cycles:200
		JESD22-A104 condition B	
5-3	Mechanical shock	MIL-STD-883 2002 condition B	1500g, half-sine,0.5ms, each axis for3time
		JESD22-B104 condition B	

■ Test circuit (CMOS Load)



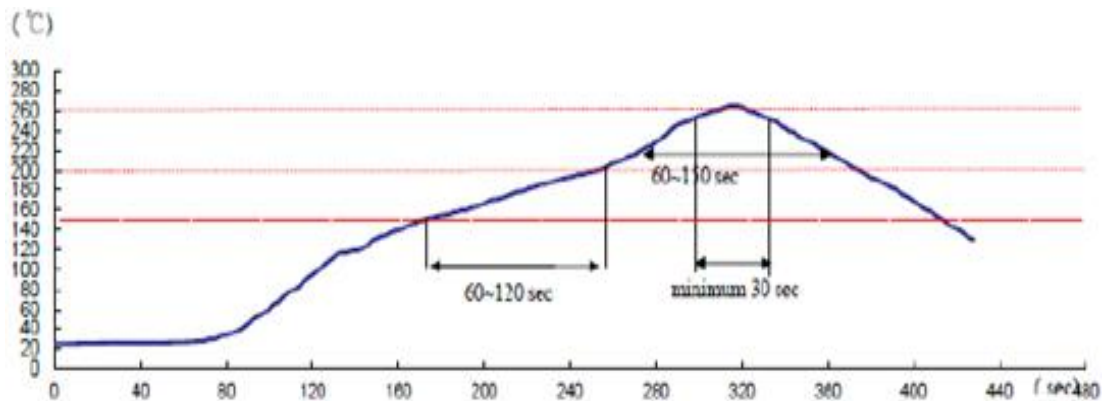
■ Output waveform (CMOS Load)



■ Recommended IR Reflow Profile

IR reflow profile of ceramic SMD products for Pb free process

IR-Reflow Profile



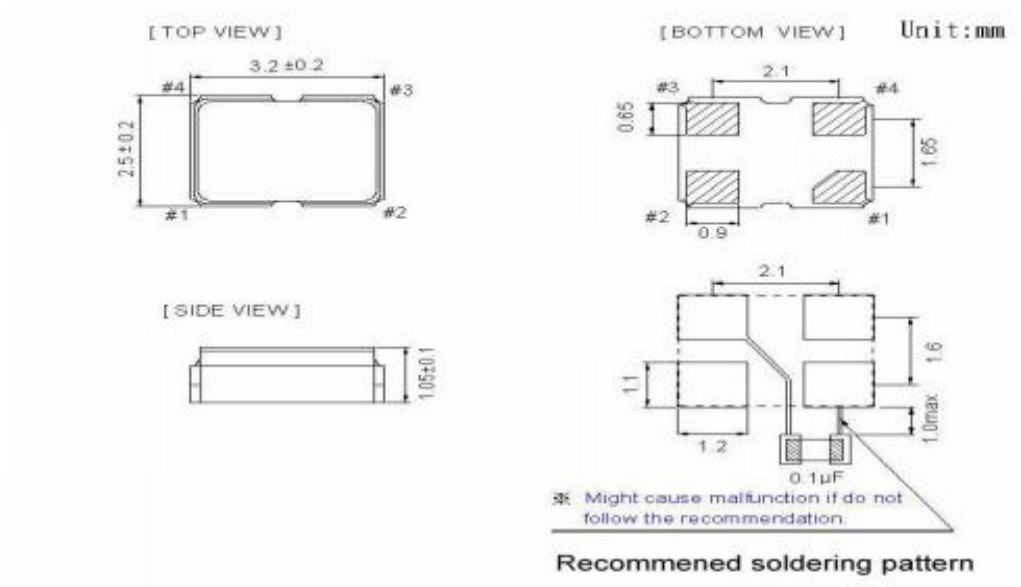
Reference Standard: JEDEC-STD 020

Test conditions: Pre-heating: 150°C to 200°C , 60~120sec,

Heating: 217°C , 60~150sec,

Peak temperature: $260 \pm 5^\circ\text{C}$, 25 ± 5sec

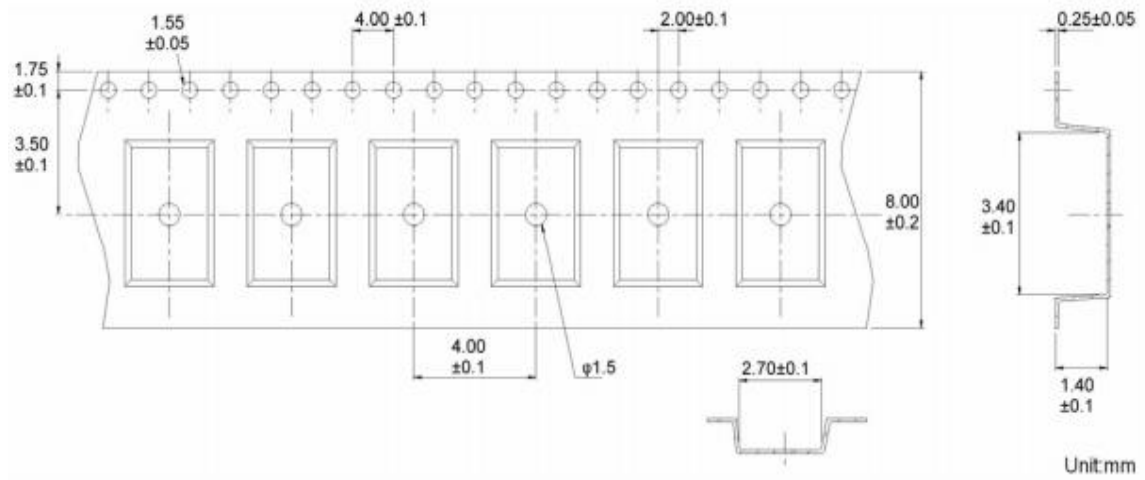
■ Product Dimensions



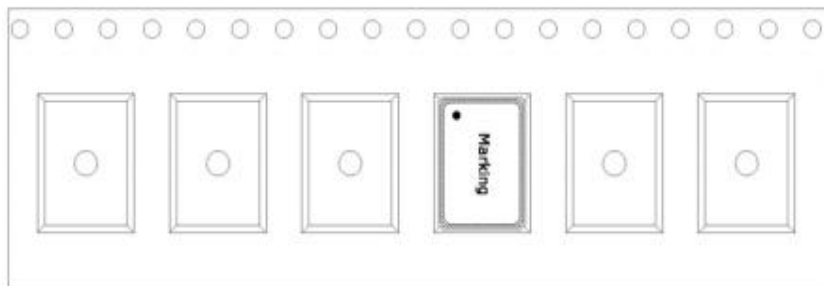
PIN FUNCTIONS

Pin	Function
#1	Tri-State
#2	GND
#3	Output
#4	V _{DD}

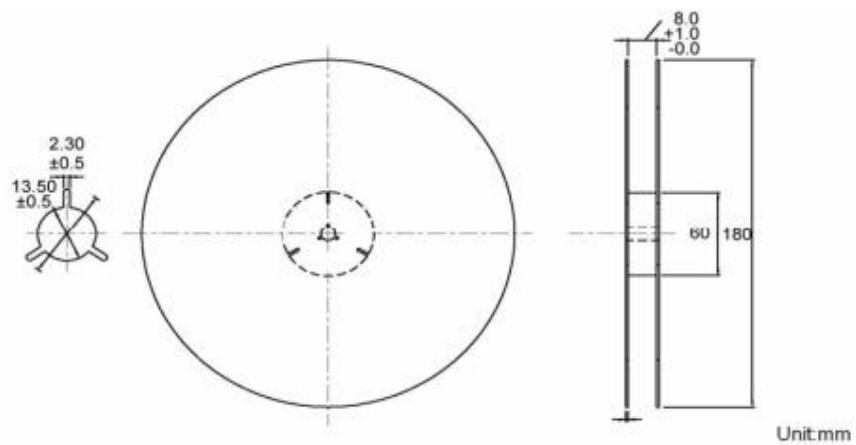
■ Tape (Carrier) and Reel Dimensions



➤ THE DIRECTION OF PACKING



➤ REEL DIMENSIONS



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