



Issue	December 21, 2024
Rev.	1.0
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CRYSTAL UNIT SPECIFICATIONS

客户批准 Customer Approval

(请批准后回签一份 Please Return A Copy With Approval)

Customer	
Customer P/N	
Product	SMD 7050 TCXO
Spec	PTC7050/10.000~52.000M
A-Crystal P/N	AT7 Series

Drawn	Checked	Approved
<i>Caoqiaobang</i>	<i>Fengying</i>	<i>Tanqlong</i>

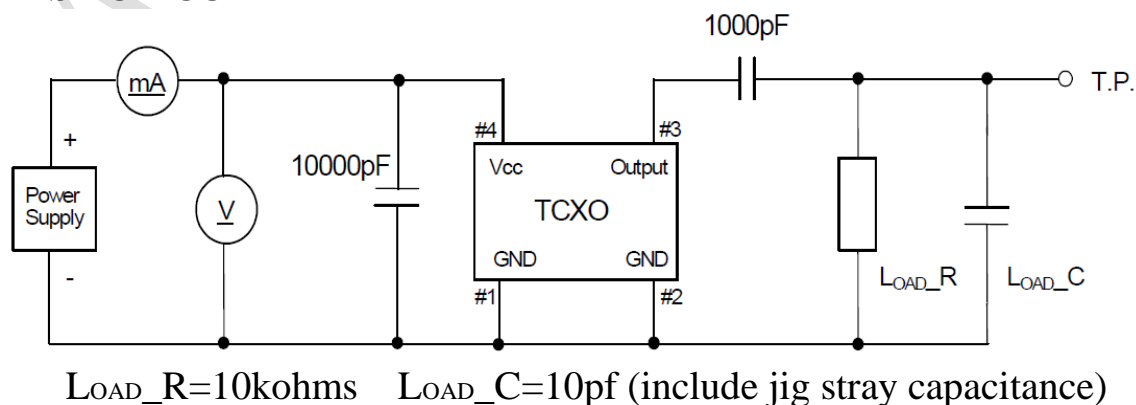


1. ELECTRICAL SPECIFICATIONS

1.1 Hold Type: PTC-7050

No.	Item	Electrical Specification				Remark
		Min.	Type	Max.	Units	
1	Nominal Frequency	10.000~52.000			MHz	
2	Nominal Frequency Tolerance	-2.0	-	+2.0	ppm	Frequency at 25°C, 1 hour after reflow
3	Frequency Stability Over Temperature	-0.5	-	+0.5	ppm	Referenced to the Frequency at 25°C.
4	Storage Temperature Range	-20	-	+70	°C	The operating temperature range over which the frequency
5	Frequency Slope of Perturbations	-0.3	-	+0.3	ppm/ °C	Minimum of 1 frequency reading every 2°C, over -40°C to +85°C
6	Supply Voltage Stability	-0.3	-	+0.3	ppm/ °C	Supply voltage varied ±5% at 25 °C
7	Load Sensitivity	-0.2	-	+0.2	ppm	±10% load change
8	Aging	-1.0	-	+1.0	ppm	first year at 25 °C
9	Supply Voltage	1.8	-	3.3	v	
10	Current Consumption	-	-	8.0	mA	At maximum supply voltage
11	Output Waveform	Clipped sine wave				DC Coupled clipped sine wave
12	Output Voltage Level	0.8	-	2	Vp-p	
13	Output Load	10Kohm//10Pf				
14	Start Up Time	-	-	5	ms	
15	Pin 1, tri-state function	pin 1=H or open.....output active at pin 3 pin 1=L.....high impedance at pin 3				
16	Package type	7.0*5.0*1.9				

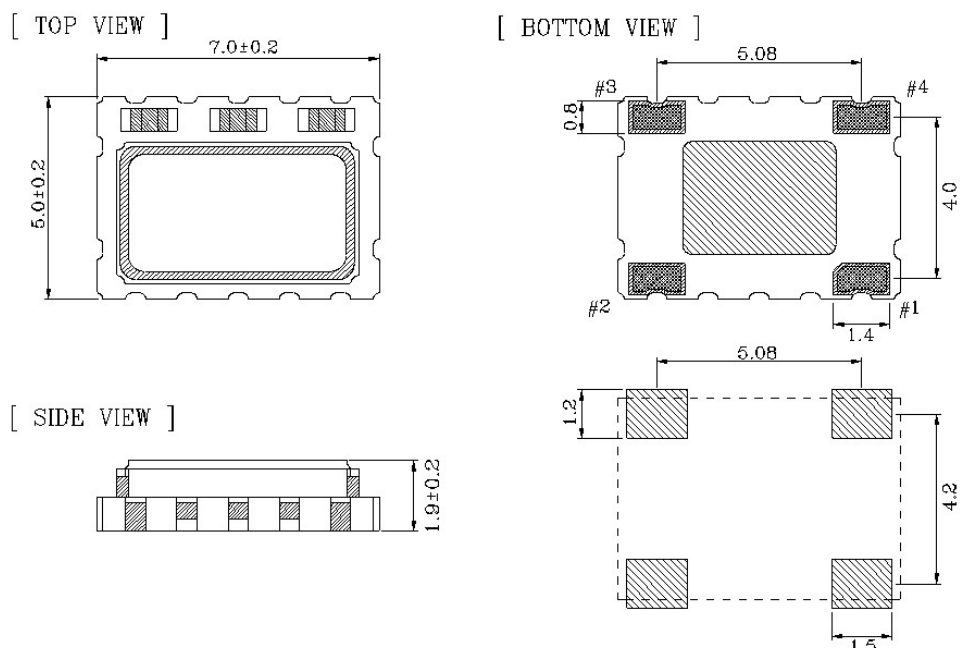
1.2 TEST CIRCUIT





2. PRODUCT SIZE

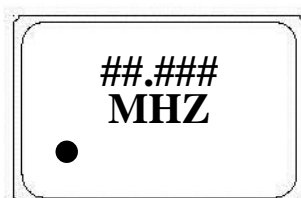
2.1 Dimension (Unit: mm)



Recommended Soldering Pattern

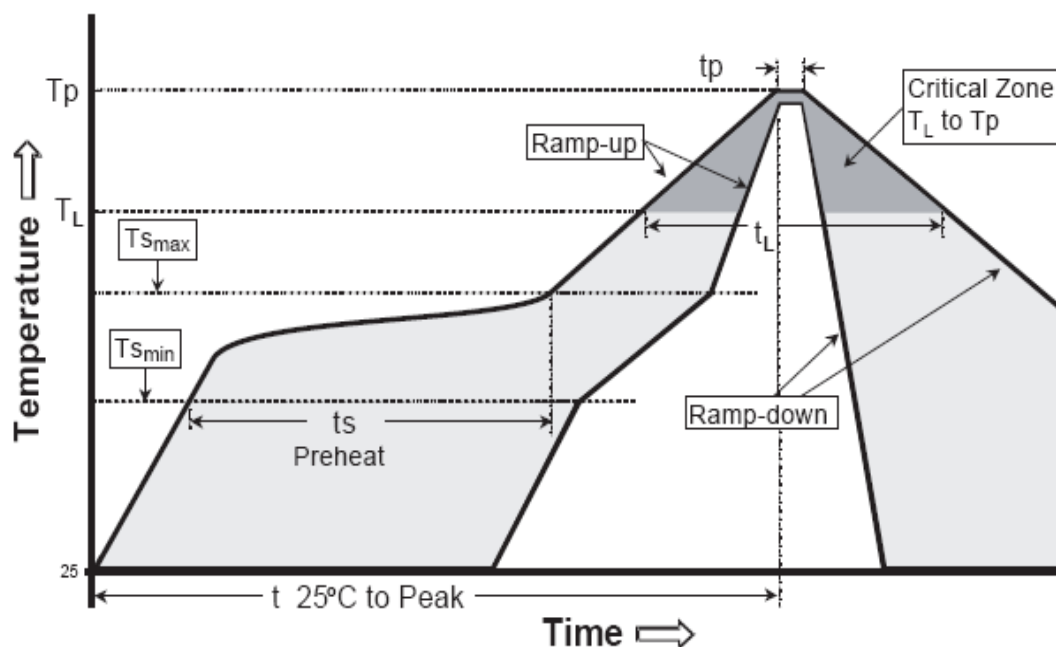
pin	Function
#1	Vcon:VC-TCXO GND/NC:TCXO
#2	GND
#3	OUTPUT
#4	V _{DD}

2.2 Marking





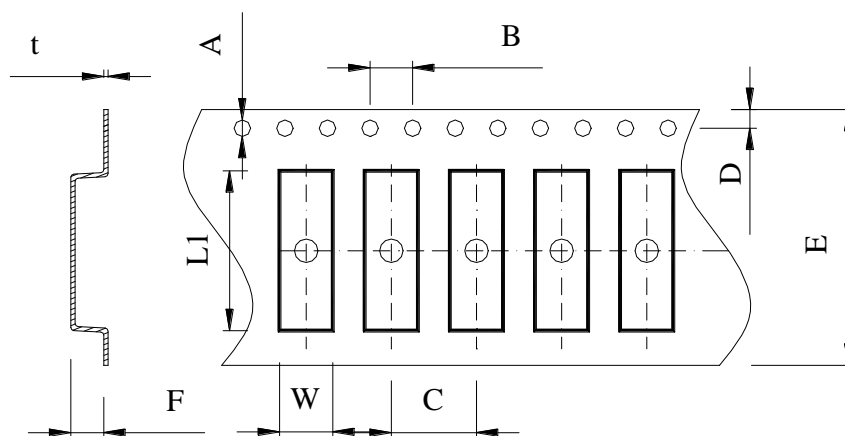
3. REFLOW PROFILES



$T_s = 200^\circ\text{C}/60 \sim 180\text{sec}$, $T_l = 217^\circ\text{C}/60 \sim 150\text{sec}$, $T_p = 260^\circ\text{C}/8 \sim 10\text{sec}$

4. PACKING

4.1 Packing Method Sketch Map (Unit: mm)



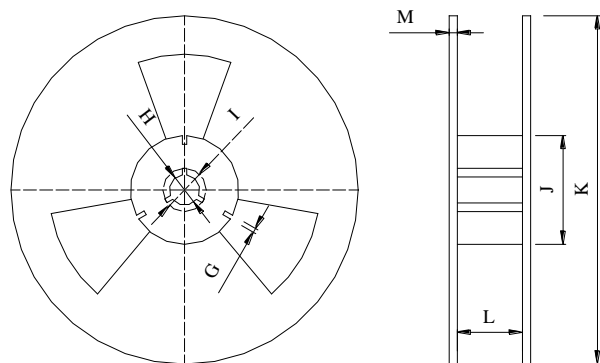
A	B	C	D	E	F	L1	W	t
1.50±0.1	4.0±0.1	8.0±0.1	1.75±0.1	12.0±0.2	1.6±0.05	7.5±0.05	5.4±0.1	0.25



ZHEJIANG A-CRYSTAL
ELECTRONIC TECHNOLOGY CO., LTD.



4.2 Reel Dimensions (Unit: mm)



G	H	I	J	K	L	M
2.5	13.5	21.6	60.0	180	9.5	1.6

1000pcs/Reel

5. Products Code

5.1 SMD CRYSTAL OSCILLATORS

公司代码 浙江一晶	产品型号 (2位)	工作频率 (全频点位数)	负载电容 (1位字母)	调整频差 (1位字母)	温度频差 (1位字母)	工作温度 (1位字母)	其它
A-crystal Logo	Package	Nominal Frequency	Load Capacitance	Frequency Tolerating	Freq Temp Characteristics	Operating Temperature Range	Others
A	T7 (PTC7050)	4M=04000	Y=5.0V	01=±1.5PPM	A=±1.0PPM	1=0~50	Special
		12.000M=12000	A=3.3V	02=±2.0PPM	B=±1.5PPM	2=-10~60	
		32.768K=32768	M=3.0V	03=±2.5PPM	C=±2.0PPM	3=-10~70	
			C=2.5V	04=±3.0PPM	D=±2.5PPM	4=-20~70	
			D=1.8V	05=±5.0PPM	E=±3.0PPM	5=-30~85	
			B=2.8V	06=±10PPM	F=±5.0PPM	6=-40~85	
				07=±15PPM	G=±0.5PPM	7=-40~105	
				08=±20PPM		8=-40~125	
				09=±25PPM			
				0A=±0.5PPM			
				0B=±1.0PPM			
				0C=±30PPM			
				0D=±50PPM			