



ZHEJIANG A-CRYSTAL
ELECTRONIC TECHNOLOGY CO., LTD.



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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 2016 TCXO
Spec	PTC2016/13.000~52.000M
A-Crystal P/N	AT6 Series

Drawn	Checked	Approved
<i>caogaobang</i>	<i>tanglong</i>	<i>huanqweilong</i>

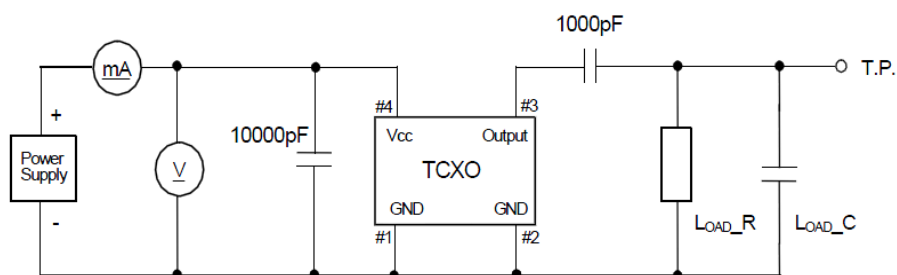


1. ELECTRICAL SPECIFICATIONS

1.1 Hold Type: PTC-2016

No.	Item	Electrical Specification				Remark
		Min.	Type	Max.	Units	
1	Nominal Frequency	13.00~52.000			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	-40	-	+85	°C	The operating temperature range over which the frequency stability is measured
5	Frequency Slope of Perturbations	-2.0	-	+2.0	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	-	-	2.0	mA	At maximum supply voltage
11	Output symmetry	40	-	60	%	
12	Output Voltage Level	0.8	-	2	Vp-p	
13	Output Load	10Kohm//10Pf				
14	Start Up Time	-	-	2	ms	
15	Output Wav form	Clipped sine wave				DC Coupled clipped sine wave
16	Package type	2.0*1.6*0.73				

1.2 TEST CIRCUIT

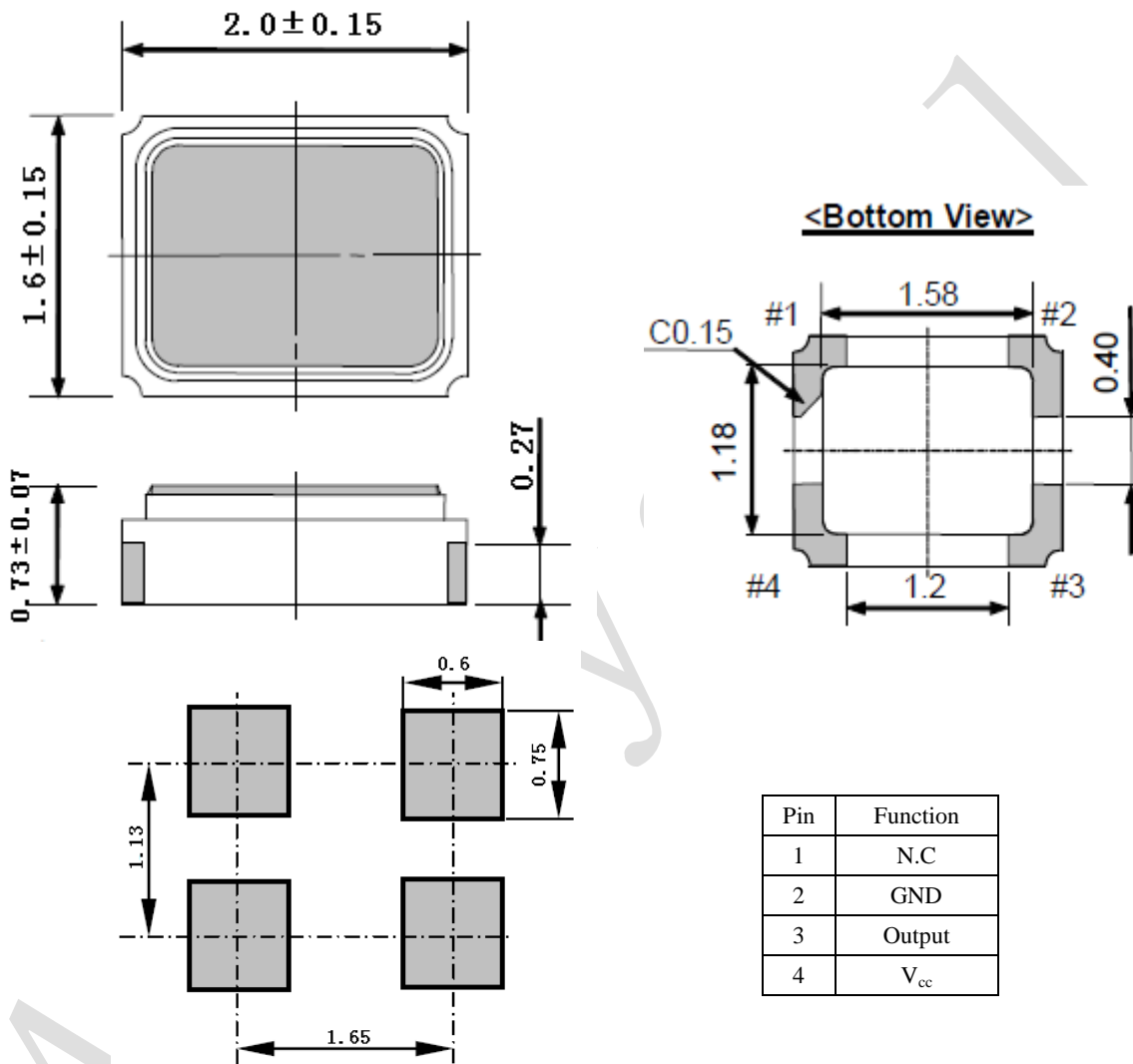


LOAD_R=10kohms LOAD_C=10pF (include jig stray capacitance)



2. PRODUCT SIZE

2.1 Dimension (Unit: mm)



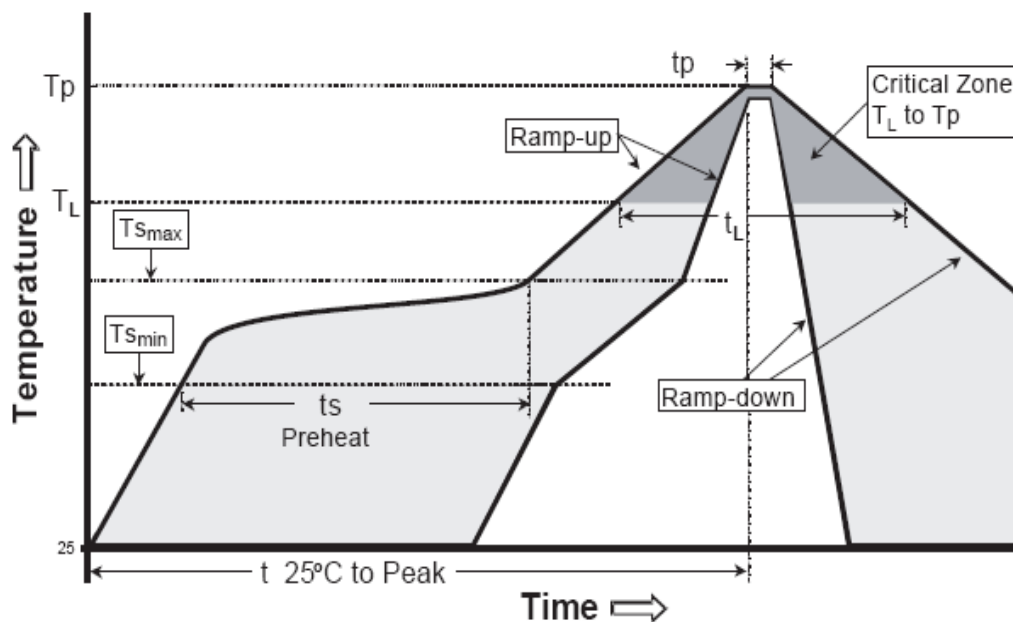
Pin	Function
1	N.C
2	GND
3	Output
4	V _{cc}

2.2 Marking





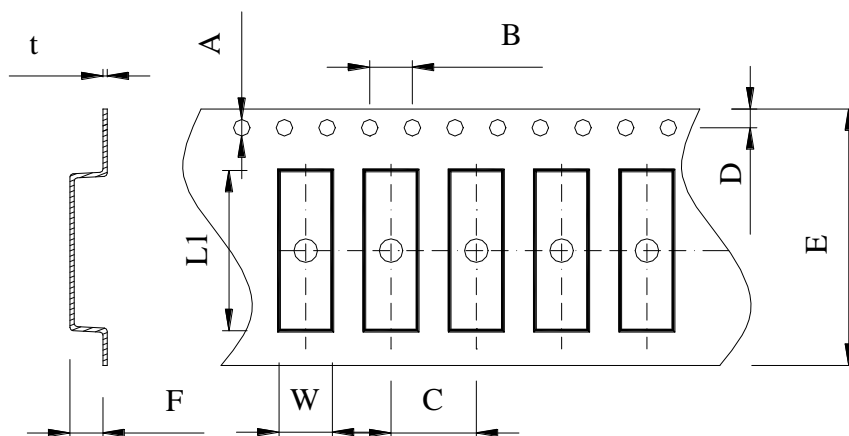
3. REFLOW PROFILES



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

4. PACKING

4.1 Packing Method Sketch Map (Unit: mm)



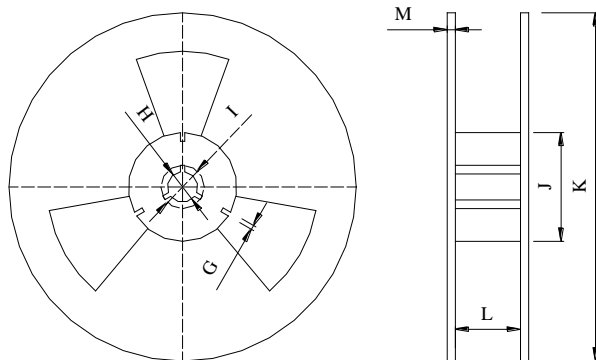
A	B	C	D	E	F	L1	W	t
1.50±0.1	4.0±0.1	4.0±0.1	1.75±0.1	8.0±0.2	1.15±0.05	2.25±0.05	1.85±0.1	0.25



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4.2 Reel Dimensions (Unit: mm)



G	H	I	J	K	L	M
2.3	13.5	21.6	60.0	178	8.0	1.3

3000pcs/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	T6 (PTC2016)	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			