
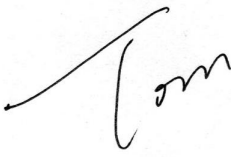
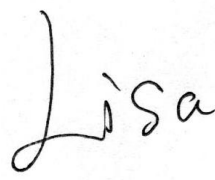


Customer	
Production Name	TCXO 2.5*2.0
Customer P/N	N/A
TROQ P/N	RTQ26000020
Revision	A
Print Date	2023/9/5

Drawn	Checked	Approved
		



RoHS Compliant

● ELECTRICAL PARAMETERS

Parameter	Condition	Min	Typ.	Max	Units
Operation conditions					
1.Nominal Frequency	Frequency at 25 °C	26.000000			MHZ
2.Supply voltage (Vo)		1.70	1.80	3.30	V
3.Current consumption		-	-	1.5	mA
4.Operating temperature range		-40	-	85	°C
5.Storage temperature range		-40	-	90	°C

Output characteristics

1.Output type	Decoupling capacitor is required in external circuit	Clipped sine wave			
2.Standard output Load		10 KΩ//10 pF			
3.Output level		0.8	-	1.5	V
4.Duty cycle		40	50	60	%
5.Harmonics		-	-	-5	dBc
6.Start-up time Vs. frequency	Within +1.0 ppm of final frequency	-	-	2	ms
7.Start-up time VS. output level	Reach 90% of final Vpp output level	-	-	2	ms

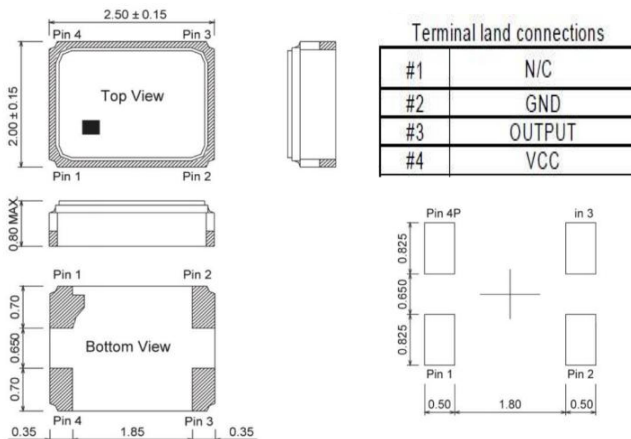
Frequency Characteristics

1.Frequency tolerance before reflow	At 25+2°C, before reflow, refer to nominal frequency	-1.0	-	1.0	ppm
2.Frequency tolerance after reflow		-2.0	-	2.0	ppm
3.Frequency stability VS. temperature		-0.5	-	0.5	ppm
4.Frequency stability Vs. supply voltage	+ 5% Vpp variation	-0.2	-	0.2	ppm
5.Frequency stability VS. load variation	+ 5% load variation	-0.2	-	0.2	ppm
6.Aging over 1st year	At 25+°C	-1.0	-	1.0	ppm

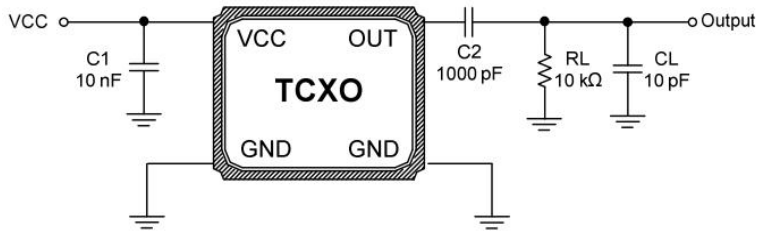
Phase noise characteristics

Phase noise at 10Hz offset		-	-	- 83	dBc/Hz
Phase noise at 100Hz offset		-	-	- 108	dBc/Hz
Phase noise at 1KHz offset		-	-	- 135	dBc/Hz
Phase noise at 10KHz offset		-	-	- 148	dBc/Hz
Phase noise at 100KHz offset		-	-	- 148	dBc/Hz
Phase noise at 1MHz offset		-	-	- 148	dBc/Hz

OUTLINE DIMENSIONS(UNIT:mm) 外形尺寸 (单位: mm)



● Test Circuit

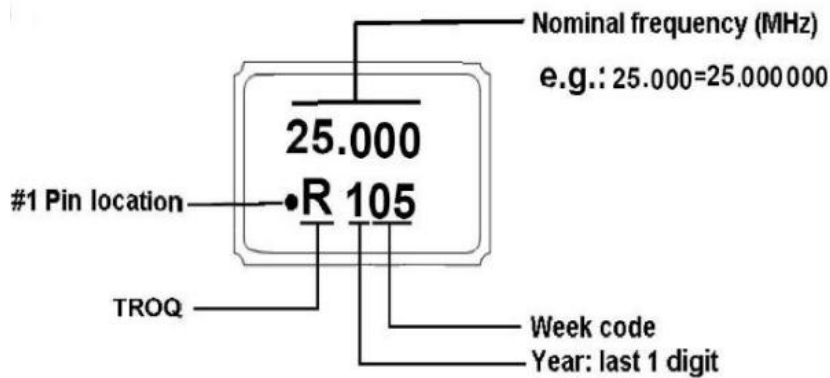


External Components

Name	Function
C1	AC Noise Bypass for VCC
C2	DC Block for Output
RL	Load Resistance
CL	Load Capacitance

Note: Bypass capacitor (C1) and DC blocking capacitor (C2) should be placed.

● Marking (标记)

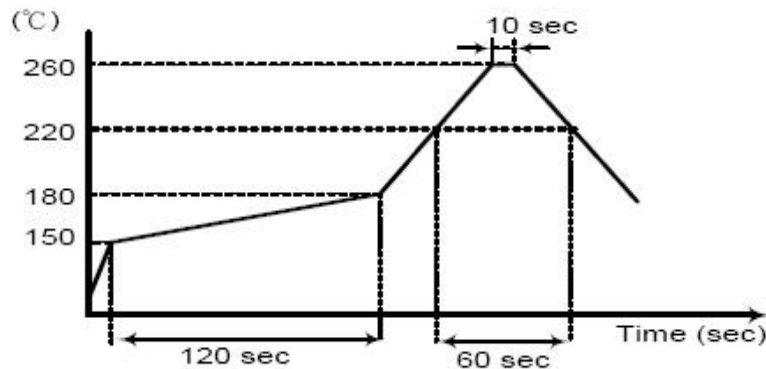


● SUGGESTED REFLOW PROFILE (回流焊曲线图)

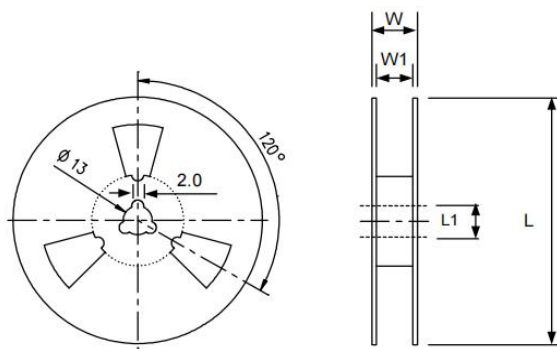
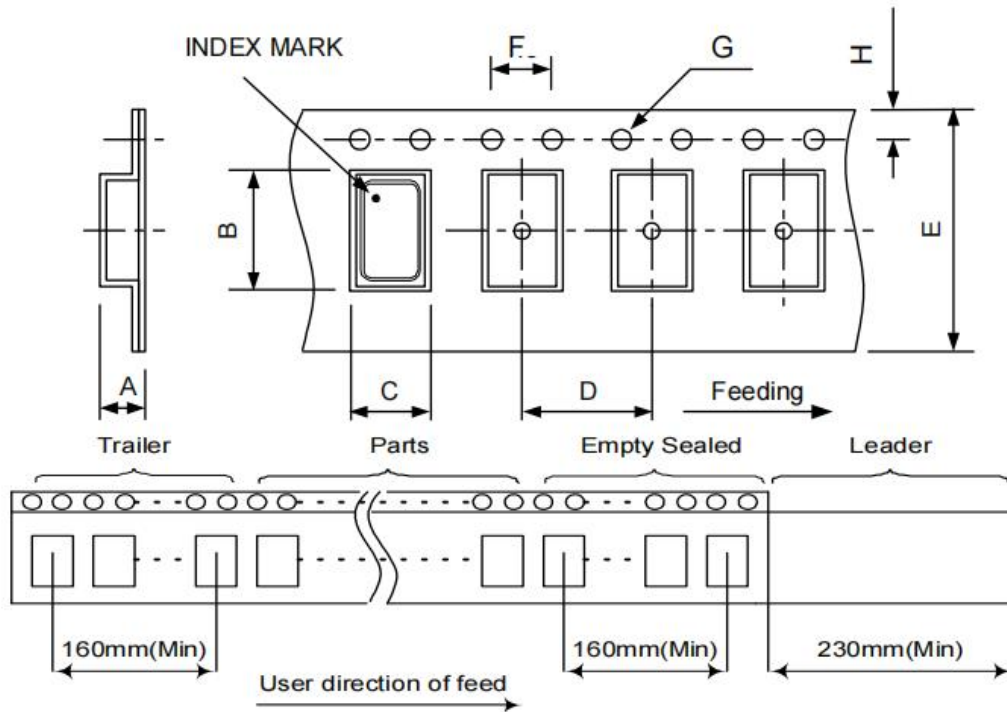
Total time:200sec.Max. (总时间: 200秒 最大)

Solder melting point:220°C (熔点220 °C)

Profiles Feature (特性)		Pb-Free Assembly
Average Ramp-up Rate(Ts max to Tp)	平均升温速度	3°C/second Max
Preheat	预热	
■ Temperature Min (Ts min)	最低温度	125°C
■ Temperature Max (Ts max)	最高温度	200°C
■ Time (ts min to ts max)	从最低到最高时间	(60~180) seconds
Time maintained above	维持上述时间	
■ Temperature(T1)	温度	217°C
■ Time(tp)	时间	(60~150) seconds
Peak/Classification Temperature(Tp)	最高点温度	260 °C
Time within 5°C of actual Peak Temperature(tp)	高温维持时间	(20~40) seconds
Ramp-down rate	降温速度	6°C/second max
Time 25°C to Peak Temperature	从25°C到最高温度的时间	8 minutes max
Suggest reflow times	建议 reflow次数	3 Times max



- PACKING (包装) 3Kpcs/REEL



Unit: mm

DIMENSIONS (mm)	A	B	C	D	E	F	G	H	L	L1	W	W1	Standard Reel Quantity is 3,000 pcs per reel
	1.15	2.70	2.25	4.00	8.00	4.00	1.55	1.75	178	13.0	11.6	8.4	

● RELIABILITY SPECIFICATIONS (信赖度试验)

No	Test Item (测试项目)	Test Conditions (测试条件)	Reference (参考)
1	High Temperature High Humidity Storage (高温、高湿、储存)	Temperature: 85°C±3°C 温度: 85°C±3°C Relative Humidity:85%RH 相对湿度: 85%RH Time: 96 Hours 时间: 96小时	JIS C5023
2	High Temperature Storage (高温储存)	Temperature: 125°C±3°C 温度:125°C ±3°C Time: 96 Hours 时间:96 小时	MIL-STD-883E Method 1005.8
3	Low Temperature Storage (低温储存)	Temperature: -40°C ±3°C 温度: -40°C ±3°C Time: 96Hours 时间: 96小时	MIL-STD-883E Method 1013
4	Thermal Shock (温度冲击)	Temperature1:-55°C ±5°C 温度1:-55°C ±5°C Temperature2:85°C ±5 °C 温度2: 85°C ±5 °C Temperature change between T1 and T2 5 min T1和T2温度在5分钟内改变 10cycles maintain T1 and T2 for 30 minutes each mone cycle 每次循环30分钟共10次	MIL-STD-202F Method 107 Condition A
5	RESISTANCE TO SOLDER HEAT (耐焊接热)	Solder Temperature: 260°C ±5°C 焊槽温度:260°C ±5°C Time: 10±1 Seconds 时间: 10±1秒	MIL-STD-202F Method 210E
6	Solderability(可焊性)	The solder pot temperature is 245±5°C , dwell time 5±0.5sec 245±5°C焊锡槽浸润5±0.5秒	J-STD-002B
7	Drop Test (落下试验)	3 Times Free Fall from 75cm height table to 3cm thickness hard wood board 从75cm高度3次跌落到3cm厚硬质木板上	JIS C6701
8	MECHANICAL SHOCK (机械冲击)	Half sine wave,1000 G 半正弦波,加速度1000G 3 Times for all 3 directions X、Y、Z 三个相互垂直方向各三次	MIL-STD-202F Method 213B
9	Vibration (机械振动)	Frequency Range: 10Hz~55Hz 频率范围: 10Hz~55Hz Amplitude: 0.75mm 振幅: 0.75mm 2 Hours in each direction, total 6 Hours X、Y、Z 三个相互垂直方向各振动2小时	MIL-STD-883E Method 2007.3
10	Leakage Test (气密性)	Take measurements with a helium Leakage detector 氦质检漏 Leakage Rate ≤1×10 ⁻³ Pa cm ³ /s 漏率 ≤1×10 ⁻³ Pa cm ³ /s	MIL-STD-883E