

7X Series
TCXO 2.0×1.6mm



Approved by:
Checked by:
Issued by:

SPECIFICATION

PN: 7X3200000C01GJM

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7X Series

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FEATURE

- | Temperature Stability: $\pm 0.5 \text{ ppm} \sim \pm 2.5 \text{ ppm}$.
- | Operating Temperature Range: $-30 \sim 85 \text{ }^{\circ}\text{C}$.
- | Supply Voltage: $1.8 \text{ V} \sim 3.3 \text{ V}$.
- | Voltage Control Function Available.
- | Applications: GPS, WiMAX, Cellular and Wireless Communications.
- | RoHS Compliant / Pb Free.

ELECTRICAL SPECIFICATIONS

Item	Parameters		Condition	Electrical Specifications				Note
				MIN	TYP	MAX	UNITS	
1	Nominal Frequency			32.000			MHz	
2	Operating Temperature Range			-30		+85	$^{\circ}\text{C}$	
3	Supply Voltage			3.135	3.3	3.465	V	
4	Current Drain					1.5	mA	
5	Output Level			0.8		2.0	V	1
6	Output Type			Clipped Sine wave				
7	Output Load	Resistance		9	10	11	k Ω	
8		Capacitance		9	10	11	pF	
9	Frequency Tolerance		After 2 times reflow			± 0.5	ppm	2
10	Frequency Stability	vs. Temperature	Temp: $-30 \sim +85 \text{ }^{\circ}\text{C}$			± 1.5	ppm	3,4
11		vs. Load	Load: $10 \text{ k}\Omega // 10 \text{ pF} \pm 10\%$			± 0.2	ppm	3,4
12		vs. Supply Voltage	Vcc: $1.8 \text{ V} \pm 5\%$			± 0.2	ppm	
13	Storage Temperature			-40		+85	$^{\circ}\text{C}$	5
14	Start-up Time	vs. Frequency	Within $\pm 1 \text{ ppm}$			2.0	ms	
15		vs. Output Level	To 90% of Vp-p			2.0	ms	
16	Linearity					10	%	
17	Aging					± 1.0	ppm/year	
18	Phase Noise	@ 1Hz offset				-48	dBc/Hz	
19		@ 10Hz offset				-83	dBc/Hz	
20		@ 100 Hz offset				-109	dBc/Hz	
21		@ 1 kHz offset				-130	dBc/Hz	
22		@ 10 kHz offset				-140	dBc/Hz	
23		@ 100 kHz offset				-145	dBc/Hz	

Note 1: Decoupling capacitor is required in external circuit.

Note 2: Refer to nominal frequency

Note 3: Refer to frequency at $25 \pm 2 \text{ }^{\circ}\text{C}$

Note 4: Minimum of 1 frequency reading every $2 \text{ }^{\circ}\text{C}$ over temperature, based on temperature varied at maximum of $2 \text{ }^{\circ}\text{C}$ per minute.

Note 5: Frequency deviation at $25 \text{ }^{\circ}\text{C}$ after reciprocal temperature cycle over the operating temperature range

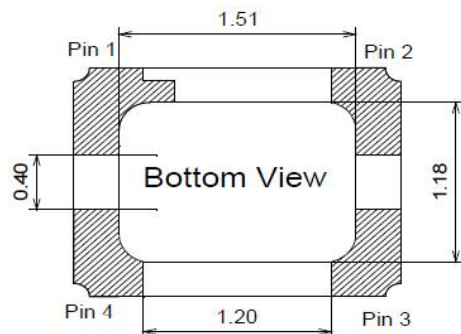
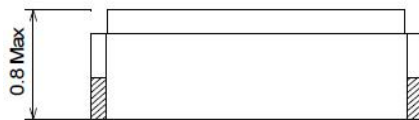
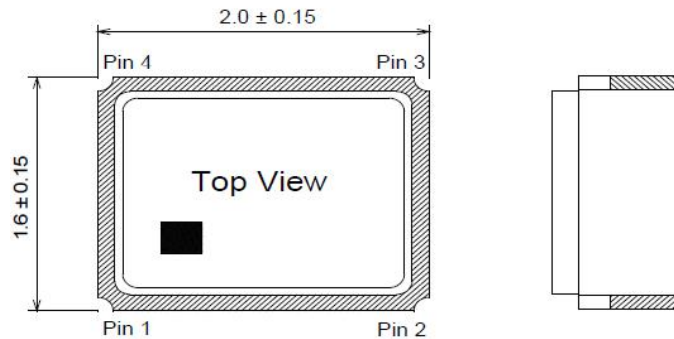
The design, manufacturing process, and specifications of this device are subject to change without notice.

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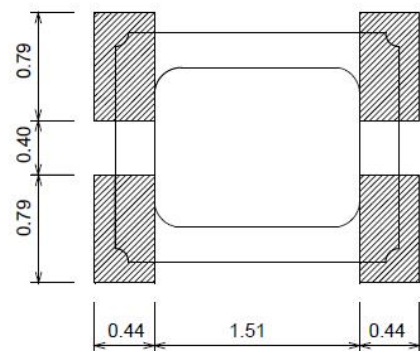
DIMENSIONS (Unit: mm)



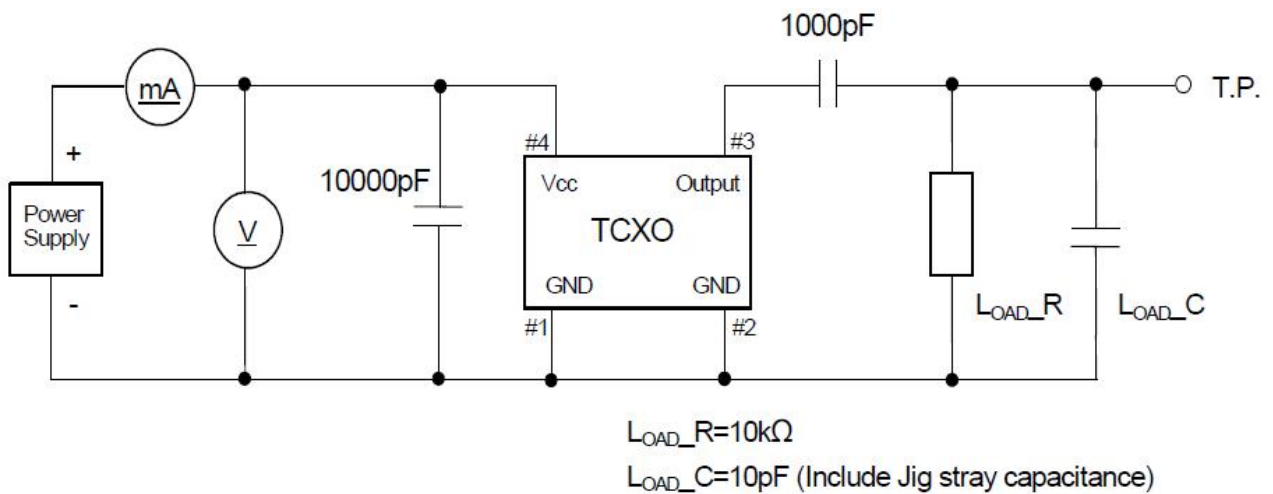
Pin Connection

Name	Connection
Pin 1	GND or NC
Pin 2	GND
Pin 3	OUTPUT
Pin 4	VCC

Recommended Land Pattern



Measurement Circuit

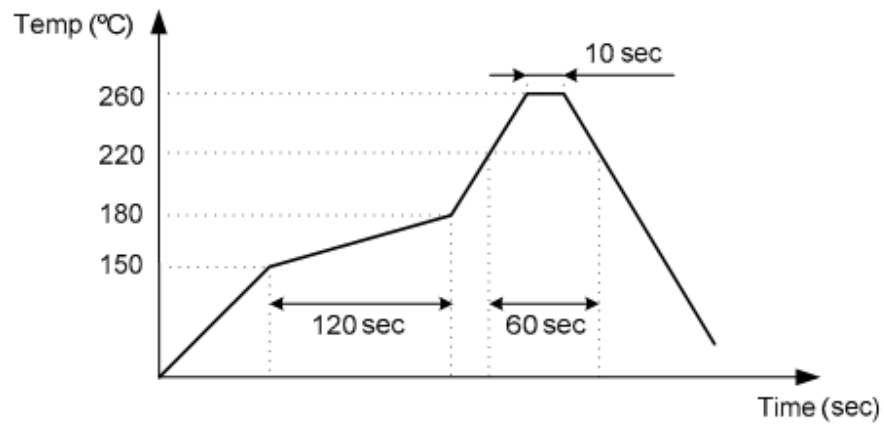


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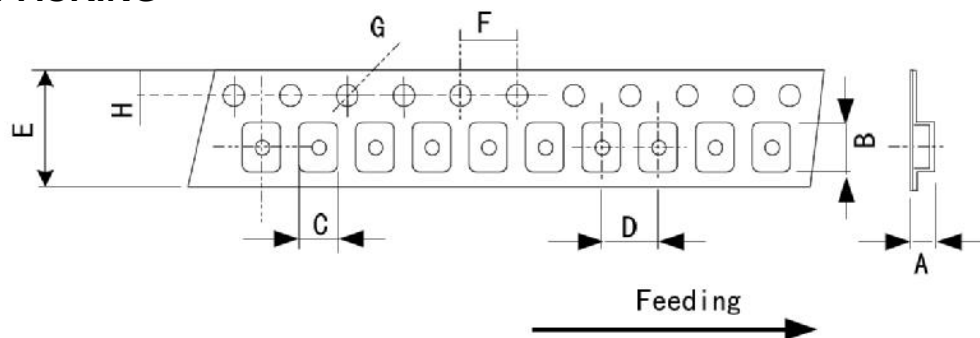


Reflow Profile

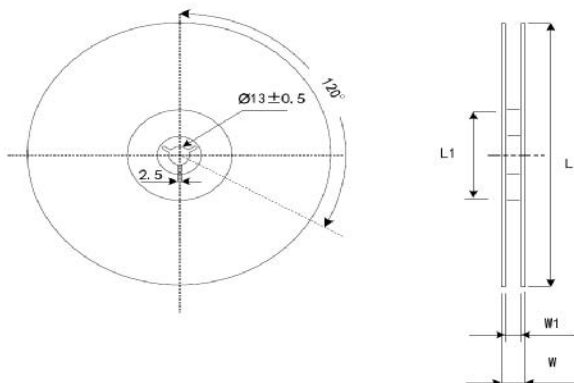


Note : Total Time: 200 sec. Max., Solder Melting Point: 220°C

PACKING



DIMENSIONS	A	B	C	D	E	F	G	H	(UNIT:mm)
	0.90	2.30	1.90	4.00	8.00	4.00	1.55	1.75	
	±0.10	±0.10	±0.10	±0.10	±0.20	±0.10	±0.05	±0.10	



DIMENSIONS	L	L1	W	W1	Standard Reel Quantity is 3,000 pcs per reel
	178	60.2	11.5	8	
	±1.00	±0.50	±0.2	+1/-0	(UNIT:mm)

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