ROHS COMPLIANT

APPROVAL SHEET

Customer : _____

Part Number: _____

Part No.: 11436024576.0001

Holder : OCXO-36

Frequency: 24.576MHz

Manufacturer: _____

Date: 2023-03-22

Prepared	Checked	Approved

(For Customer Use)

Acceptable	Non-Acceptable

Revision History

No.	Revised Date	Change Content	Approved	Remark
1.0	2023-03-22	Initial Release		

1. Scope

This document describes technical guidelines of product **11436024576.0001**

2. Electrical Characteristics

SINEWAVE OUTPUT OCXO-36						
PARAMETER	SYMBOL	CONDITIONS	MIN	TYPE	MAX	UNIT
Normal Frequency	F_n	SC	-	24.576	-	MHz
Absolute maximum ratings						
Maximum Supply Range	V_{cc}	-	-0.5	-	+5.5	V
Operating Temperature range	T_A	-	-10		70	℃
Storage Temperature			-55		100	℃
Power						
Operating Supply Voltage	V_{cc}		11.4	12	12.6	V
Turn-On Power	-	Nom Vcc	-	-	4.0	W
Steady state Power	-	Nom Vcc Ta=25℃	-	-	1.4	W
Frequency Stability						
Calibration		T_A=25℃			±100	ppb
Freq VS Temperature	TS	-10℃ to 70℃(ref to 25℃)			±80	ppb
Freq. VS Voltage		Vcc=12V±5%			±5	ppb
Freq. VS Load		Load = 15pF±10%			±5	ppb
Freq VS Time (Aging)	-	Per day			±2	ppb
		Per years			±200	ppb
Warm up time		Time to within 0.1ppm			5	minutes
Short Term Stability ADEV(in still air)		@1.0 sec	-	-	0.05	ppb
Electrical Frequency Control						
Control Voltage Range	V_c	VC Transfer is positive monotonic	0		5	V
Pulling Range				±1		ppm

Center voltage				2.5		V
Input impedance (Zi)			100			KΩ
EFC Linearity					10	%
Output parameters						
Output signal		-		SINEWAVE		-
Output load		Output to ground		50		Ω
Output power		Load=50 Ω		7		dBc
Harmonic		Load=50 Ω			-30	dBc
Spurious		Load=50 Ω			-75	dBc
VREF output Voltage	VREF	VCC=12V		5		V
Phase noise		Offset = 1Hz		-80		dBc/Hz
		10Hz		-110		
	-	100Hz		-135		
	-	1KHz		-145		
	-	10KHz		-150		

3.Construction

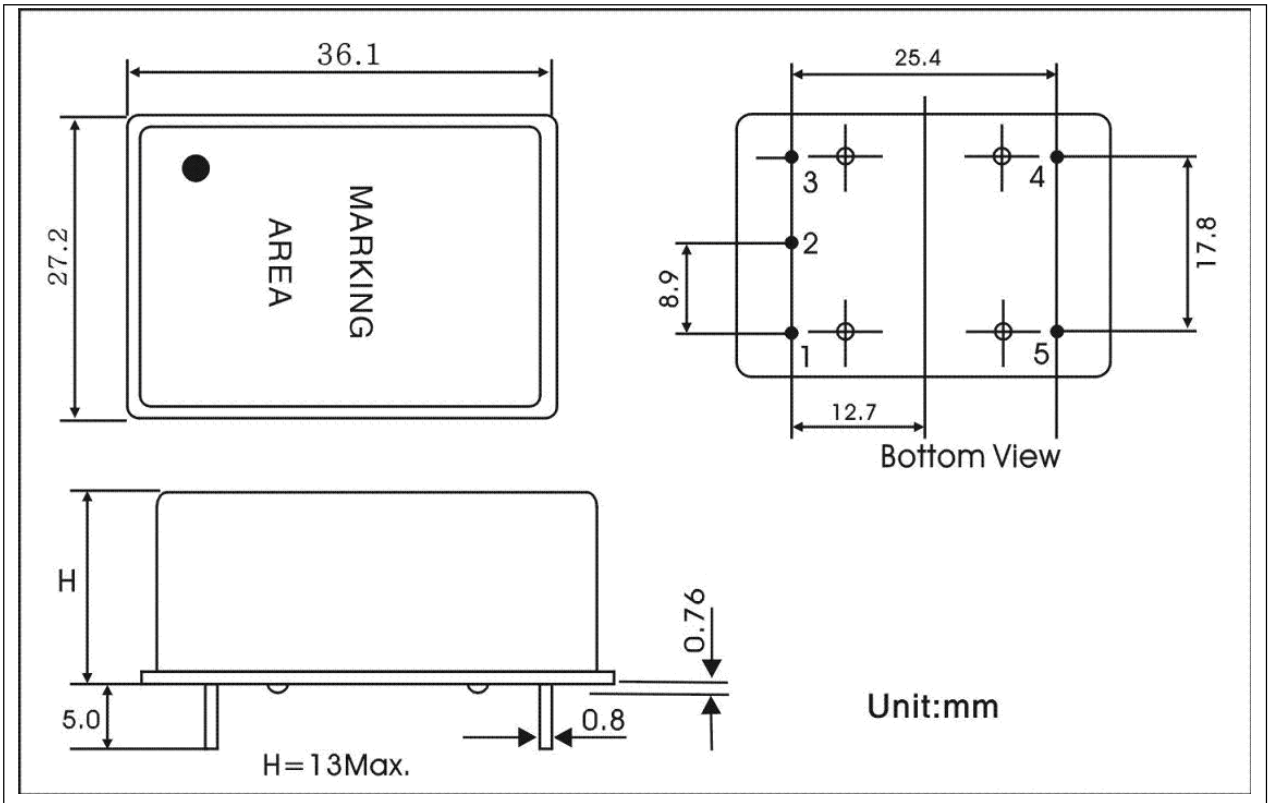
1. Oscillator enclosure seal:

☐Seam seal ■resistance weld ☐cold weld

2. crystal enclosure medium

☐nitrogen ■vacuum ☐dry air

4.Dimension:



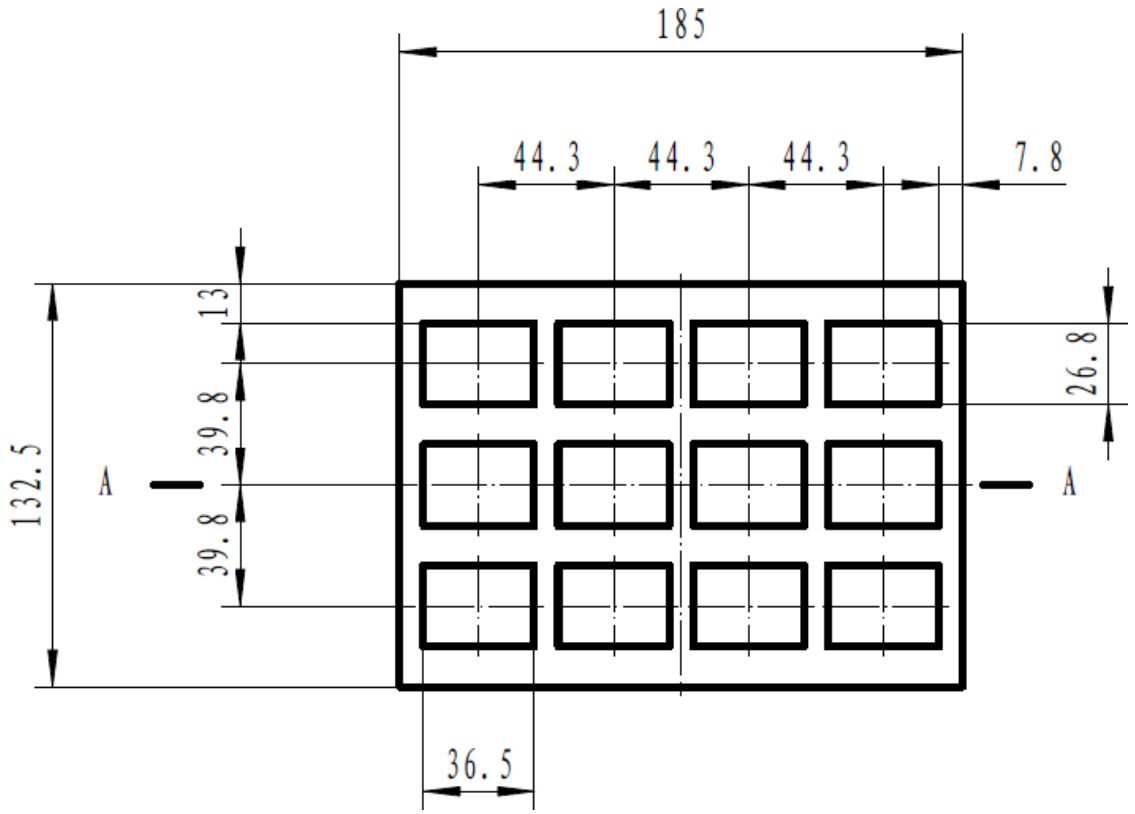
PIN	SYMBOL	FUNCTION
PIN1	Vc	Voltage control
PIN2	Vref/NC	Reference voltage
PIN3	VCC	Supply voltage
PIN4	Output	RF output
PIN5	GND	Ground

5. Marking

■ Laser Marking ☐ Ink Marking

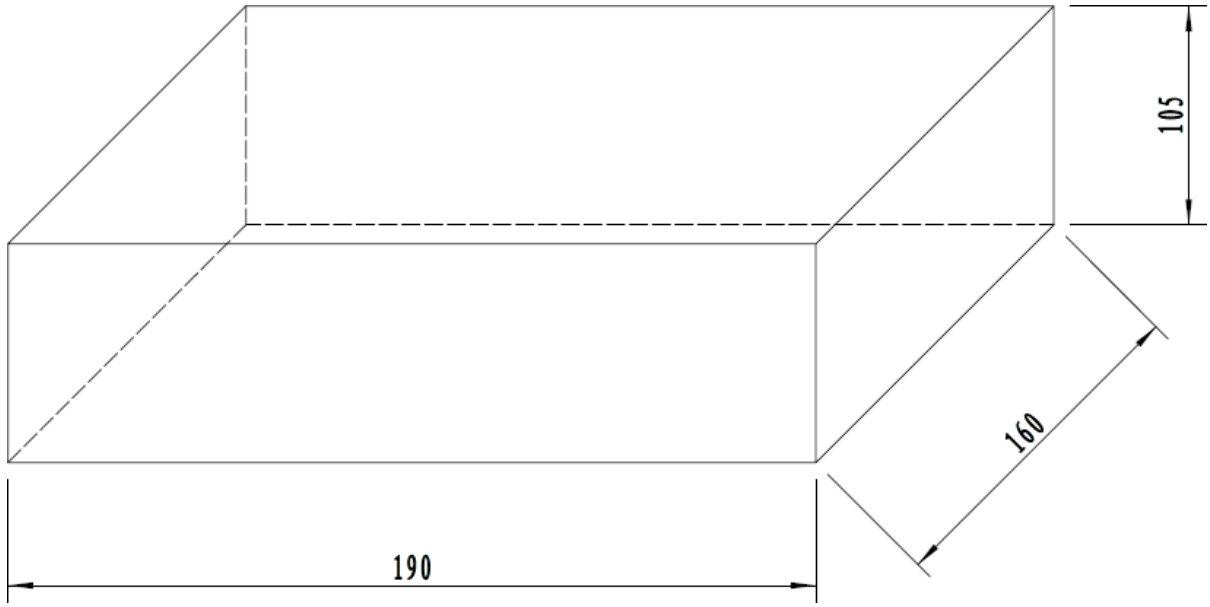
6. Packing Instruction

Units: mm



12units per tray

Tray Material: ESD sponge.



36 unites per box.

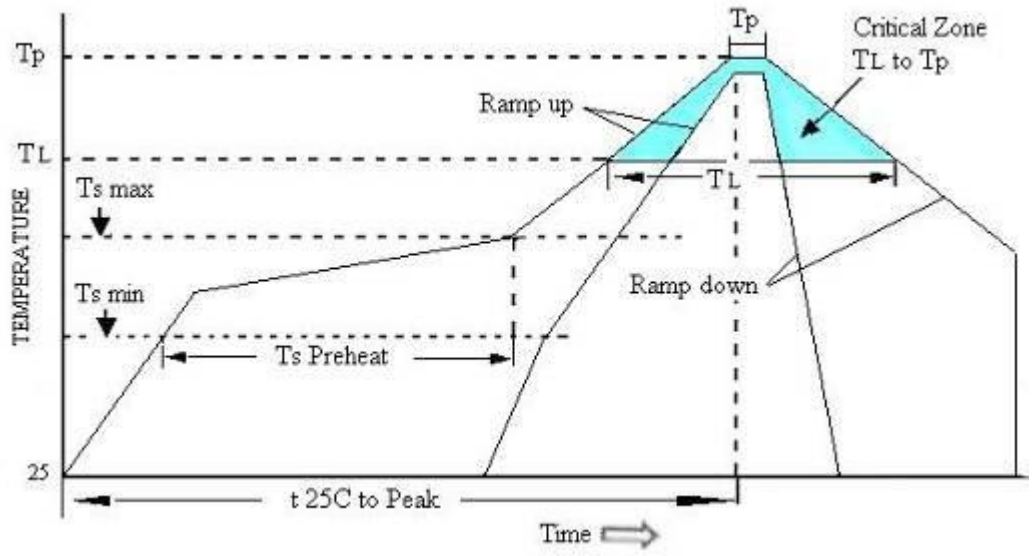
7.Reliability characteristic:

	Item	Condition	Specifications
7.1	Reflow Simulation	3X 240°C Peak 20 secs max above 240°C	ΔF≤±0.2ppm
7.2	Power Cycle	100 Cycles -40°C, 30 minutes no power (off) and 30 minutes powered (on) -- Test product for functionality -- Continue for another 250 cycles -- Test product for functionality -- Intenal visual and mechanical inspection	ΔF≤±0.2ppm
7.3	Thermal Shock	Subject samples to temperature extremes of –40 and +125C, 30 minute soaks at the temperature extremes, 10 seconds maximum transition time between extremes. The test duration is 10 Cycles GJB 360A-96 Method 107.	ΔF≤±0.2ppm
7.4	Mechanical Shock	Subject OCXO to 500 g's, half-sine, pulse width of 1 ms for double ovens; 1000 g's , half-sine, pulse width of 1 ms for single ovens, five shocks in each of 6 directions of 3 perpendicular planes, for a total of 30 shocks. After shock, check with final test. GJB 360A-96 Method 213	ΔF≤±0.2ppm
7.5	Vibration	Vibrate oscillators sinusoidally from 10 Hz to 55 Hz with a double amplitude of 0.60" and from 55 Hz to 500 Hz with a peak acceleration of 10 g's for 30 minutes in each of three perpendicular directions. Oscillators to be checked with final test after vibration. GB2423.10-1995（idt IEC 68-2-6:1982）Method Fc.	ΔF≤±0.2ppm
7.6	Free drop	Drop from 10cm height on 3cm hard wooden board for 6 times GB2423.8-1995（idt IEC 68-2-32:1990）Method Ed。	ΔF≤±0.2ppm
7.7	Aging	Bias oscillators at nominal voltage and subject oscillators to 25C for 1008 hours. Readings are to be taken with oscillator at 25C twice per day. Determine aging (frequency shift post 1008 hours minus initial	Per. Spec.

		frequency). Use the results to predict long-term aging.	
7.8	Solderability	Precondition parts by steaming (over boiling water) for 8 hours OR age the parts at 150C for 16 hours	A new uniform coating of solder shall cover a minimum of 95% of the surface being immersed.

8.All products are RoHs compliant

9. Reflow Profile



High Temperature Infrared /Convection

Note:Temperature shown are applied to body of device

Ts max to T_L(Ramp-up Rate)	3℃/second max
Preheat Temperature Min(Ts Min) Temperature Typical(Ts Typ) Temperature Max.(Ts Max) Time(ts)	 150℃ 175℃ 200℃ 60-180 seconds
Ram-up Rate(T_L to Tp)	3℃/second Max
Time Maintained Above: --Temperature(T_L) --Time(T_L)	 217℃ 60-150seconds
Peak Temperature (Tp)	260℃ Max for 10 seconds
Time within 5℃ of actual peak(t_p)	20-40 seconds
Ramp-down Rate	6℃/seconds Max
Tune 25℃ to Peak Temperature(t)	8 minutes Max
Moisture Sensitivity Level	Level 1

High Temperature Manual Soldering

Note:Temperature shown are applied to body of device

260℃ Max for 5 seconds Max, 2 times Max