


TX-401

Features

- High Frequency
- Low Phase Noise
- Low power consumption
- Output: True Sinewave
- Tight Tolerances
- Frequency range ¹ of 250 - 700 MHz
- Standard Frequencies : 256; 400; 500; 502 MHz

Applications

- Test & Measurement
- Communication Equipment
- Industrial
- Military

Performance Specifications

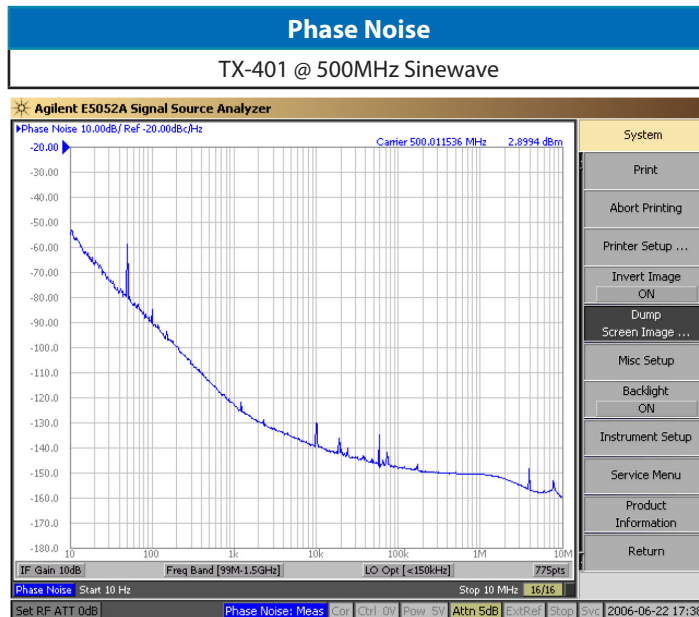
Frequency Stabilities ¹						
Parameter	Min	Typical	Max	Units	Condition	
vs. operating temperature range (referenced to +25°C)	-2		+2	ppm	-40 to +85°C	
	-1		+1	ppm	-40 to +85°C	
	-1		+1	ppm	-20 to +70°C	
Initial tolerance vs. supply voltage change vs. load change vs. aging 10 years	-2		+2	ppm	at time of shipment, nominal EFC $V_s \pm 5\%$ static Load $\pm 10\%$ static after 30 days of operation	
	-0.8		+0.8	ppm		
	-0.2		+0.2	ppm		
	-4		+4	ppm		
Supply Voltage (Vs)						
Supply voltage (Standard)	3.135	3.3	3.465	VDC		
Supply voltage (Option)	4.75	5	5.25	VDC		
Current consumption			75	mA	@3.3V	
			50	mA	@5V	
RF Output						
True Sinewave						
Load	45	50	55	Ohm		
Output Power	0	3	6	dBm		
Harmonics			-25	dBc		
Subharmonics			-40	dBc		

Performance Specifications

Frequency Tuning (EFC)						
Parameter	Min	Typical	Max	Units	Condition	
Tuning Range	Fixed TCXO; No adjust					Opti-on ⁵
Tuning Range	±5		±18	ppm		
Linearity	<10%					
Tuning Slope	Positive					
Control Input Impedance	10			kOhm		
Control Voltage Range	0.3 0.5	1.65 2.5	3.0 4.5	VDC	Vs=3.3V Vs=5V	
Additional Parameters						
Phase Noise ²		-54		dBc/Hz	10 Hz	@ 500MHz Sinewave 5V
		-90		dBc/Hz	100 Hz	
		-122		dBc/Hz	1 kHz	
		-140		dBc/Hz	10 kHz	
		-147		dBc/Hz	100 kHz	
		-150		dBc/Hz	1 MHz	
		-160		dBc/Hz	10 MHz	
Jitter			0.1	ps RMS	@ 12 kHz to 20 MHz	
Weight			2.0	g		
Processing & Packing	Handling & Processing Note					

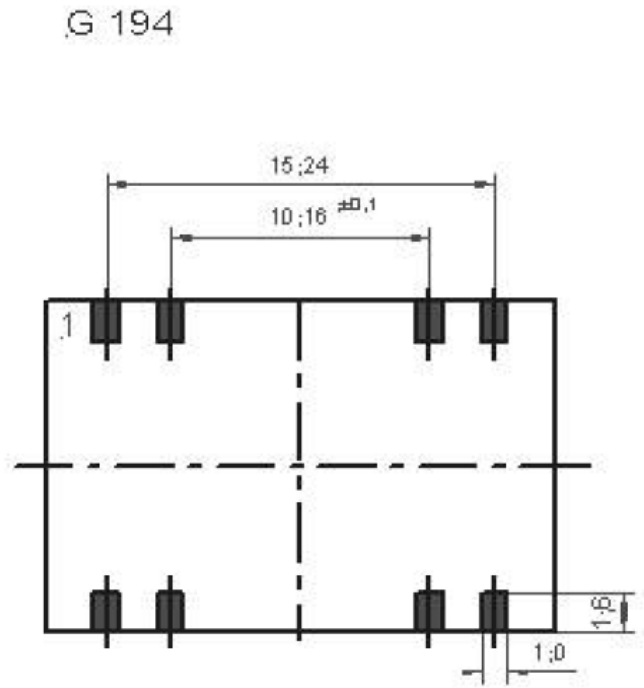
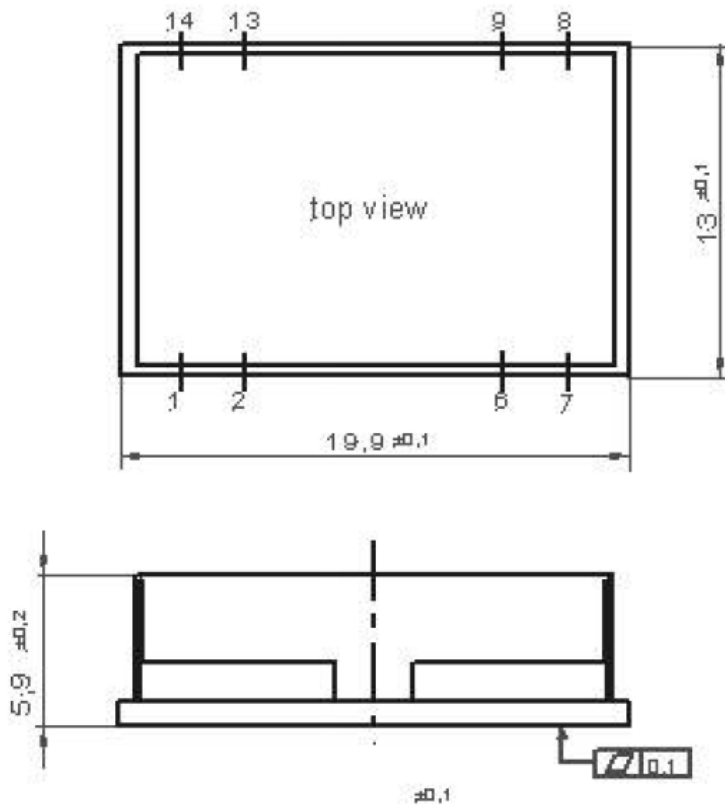
Absolute Maximum Ratings					
supply voltage (Vs)			6.0	V	
Operable Temperature Range	-40		+85	°C	
Storage Temperature Range	-40		+105	°C	

Typical Performance



Outline Drawing / Enclosure

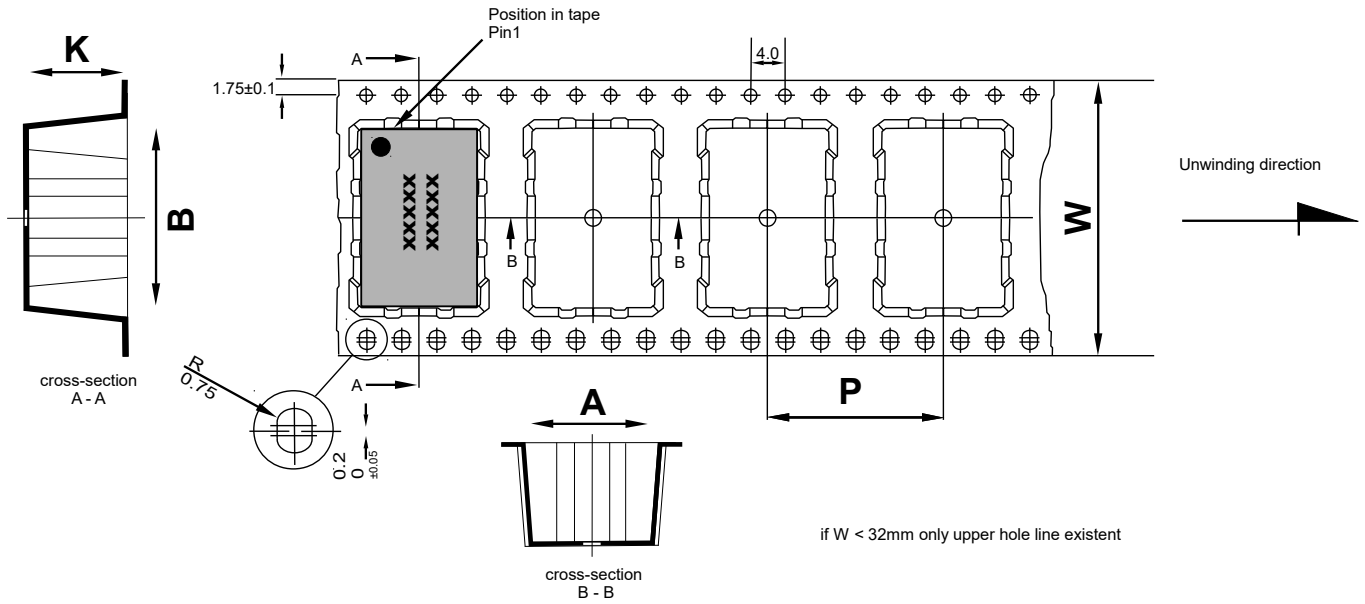
TX-401	
Type	Height "H"
G194	5.9



all units in mm

Pin Connections	
1	Control Voltage Input (Vc) / N.C.
2	N.C.
6	GND (Case)
7	GND (Case)
8	RF-Output
9	GND (Case)
13	N.C.
14	Supply Voltage Input (Vs)

Standard Shipping Method (TX-401)



Dimension in mm:

A, B and K are dependent upon component dimensions

production tolerance complying DIN IEC 286-3

All dimensions in millimeters unless otherwise stated

Enclosure Type	Tape Width W (mm)	Quantity per meter	Quantity per reel	Dimension P
G194	32		500	20

Recommended Reflow Profile

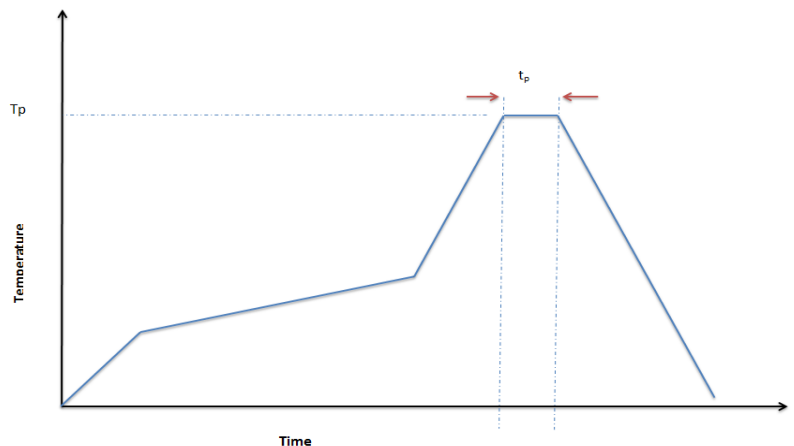
TP: max 250°C (@ solder joint, customer board level)

T_p: max: 10...30 sec

Additional Information:

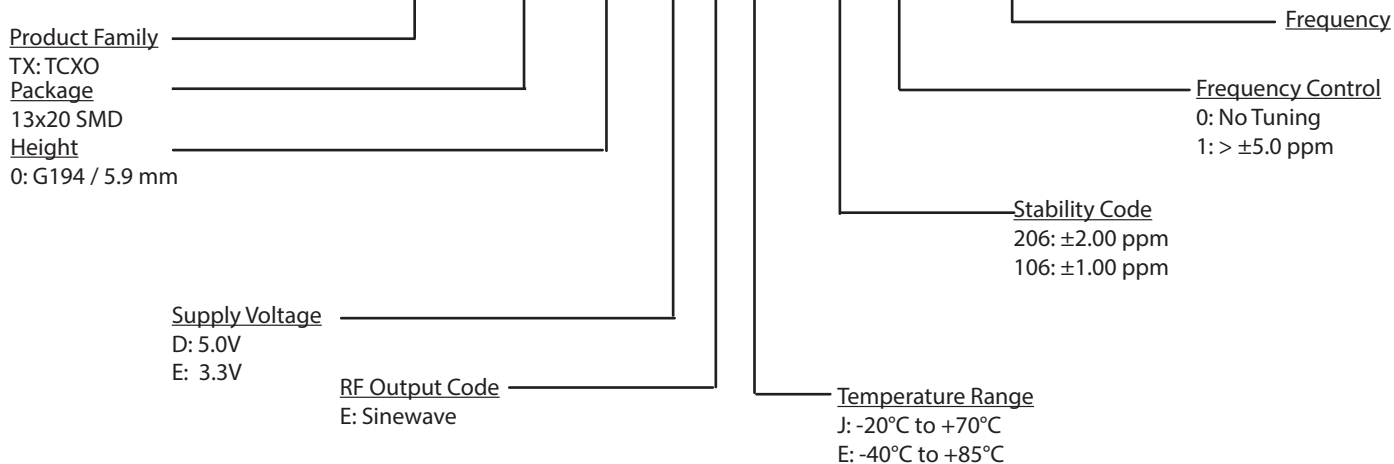
This SMD oscillator has been designed for pick and place reflow soldering

SMD oscillators must be on the top side of the PCB during the reflow process.



Ordering Information

TX - 401 0 - E E J - 106 0 - 500M0



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