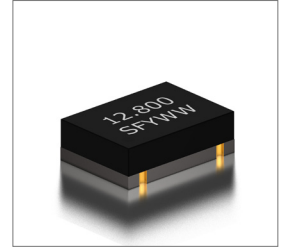


Features
<ul style="list-style-type: none"> <li>• Stratum 3</li> <li>• <math>\pm 0.28</math>ppm Stability</li> <li>• 12.8MHz</li> <li>• Tape &amp; Reel</li> <li>• MSL : Level 3</li> </ul>

Applications
<ul style="list-style-type: none"> <li>• Si5348/83/84/88/89 Network Synchronizer Clocks</li> <li>• Base Stations</li> <li>• Wireless Applications</li> <li>• Precision GPS</li> </ul>

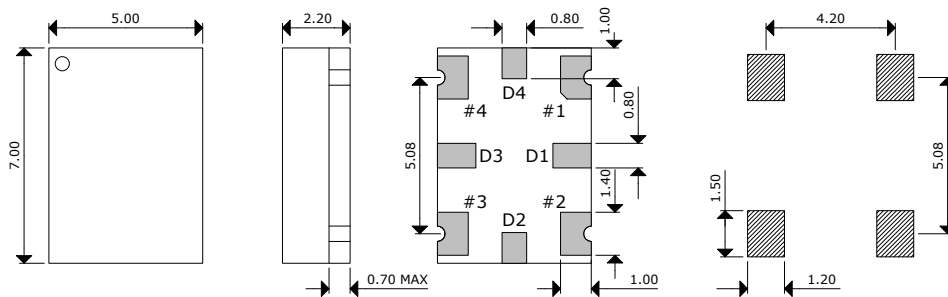

**Part Numbering Guide**

**STX478 - 12.800M**

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency	MHz		12.800		
Frequency Tolerance at +25°C	ppm	-1.0		+1.0	
Freq. Stability vs, Op Temp.	ppm	-0.28		+0.28	Ref. to Freq. observed with $f_{ref} = (f_{max} + f_{min})/2$
Freq. Stability vs, Supply Voltage	ppm	-0.05		+0.05	V <sub>DD</sub> $\pm 5\%$ Change
Freq. Stability vs, Load	ppm	-0.05		+0.05	$\pm 5\%$ Change
Freq. Stability vs, Aging/Day	ppm	-0.02		-0.02	
Freq. Stability vs, Aging/Year	ppm	-1.0		+1.0	
Operating Temperature	°C	-20		+75	
Storage Temperature	°C	-55		+105	
Supply Voltage (V <sub>DD</sub> )	V	3.13	3.3	3.47	
Current (I <sub>DD</sub> )	mA			10	
Output Load (HCMOS)	pF		15		
Output Logic HIGH Level (V <sub>OH</sub> )	V	2.4			
Output Logic LOW Level (V <sub>OL</sub> )	V			0.4	
Rise (T <sub>R</sub> ) And Fall (T <sub>F</sub> ) Time	ns			10	
Symmetry (Duty Cycle)	%	45	50	55	
Start-Up Time	ms			2	
Phase Noise 10Hz Offset	dBc/Hz		-85	-80	
Phase Noise 100Hz Offset	dBc/Hz		-115	-110	
Phase Noise 1KHz Offset	dBc/Hz		-135	-130	
Phase Noise 10KHz Offset	dBc/Hz		-145	-140	
Phase Noise 100KHz Offset	dBc/Hz		-145	-140	
Phase Noise 1MHz Offset	dBc/Hz		-150	-145	

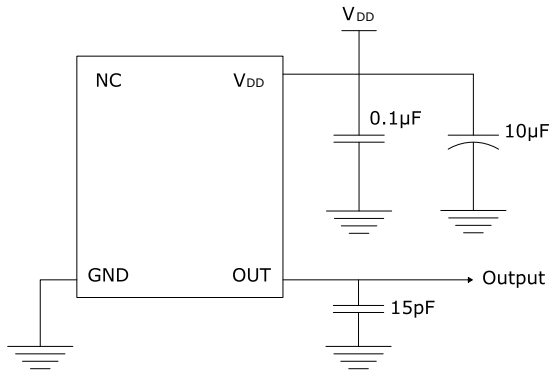
**Outline Drawing & Land Pattern**

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

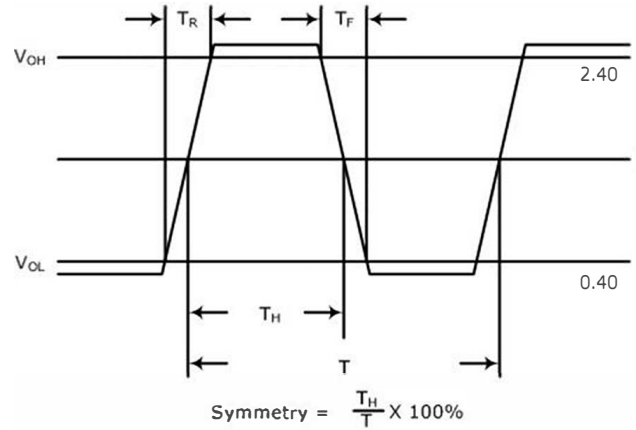


PIN	FUNCTION
1	NC
2	GND
3	OUTPUT
4	V <sub>DD</sub>
D1, D2, D3, & D4 = NC	

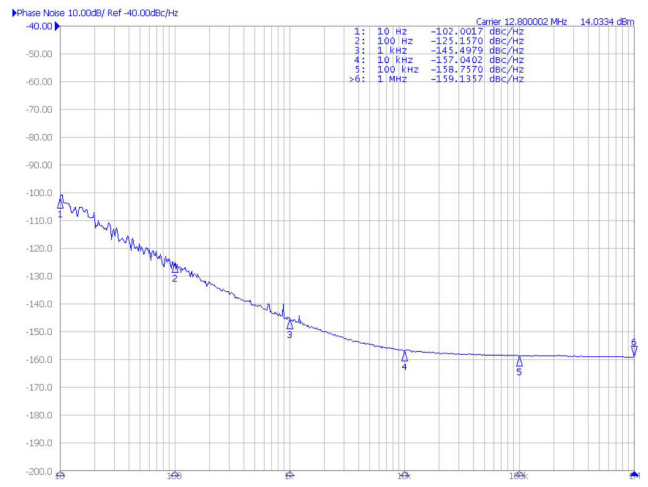
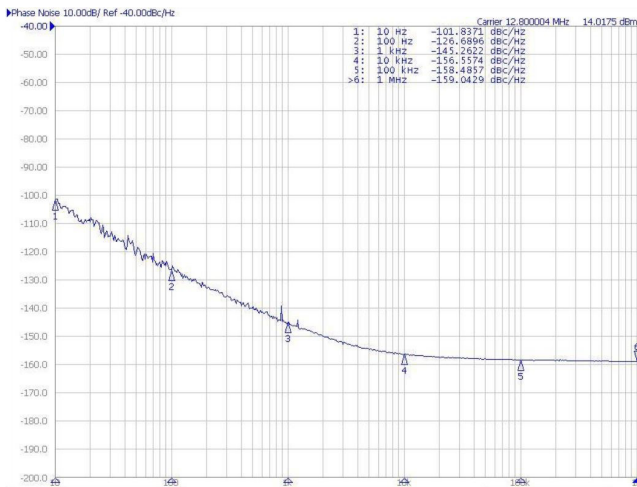
**Test Circuit (HCMOS)**



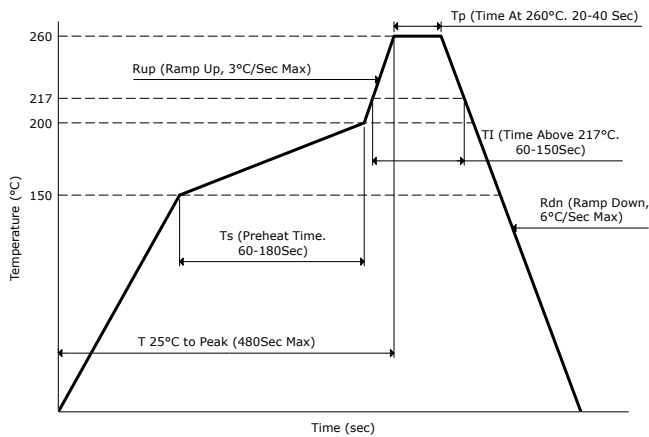
**Waveform (HCMOS)**



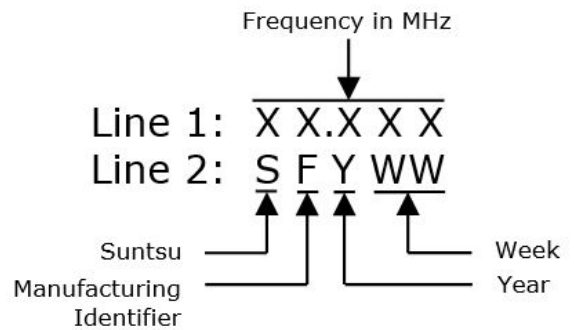
**Typical Phase Noise Performance (Measured By Agilent E5052B)**



**Reflow Profile**



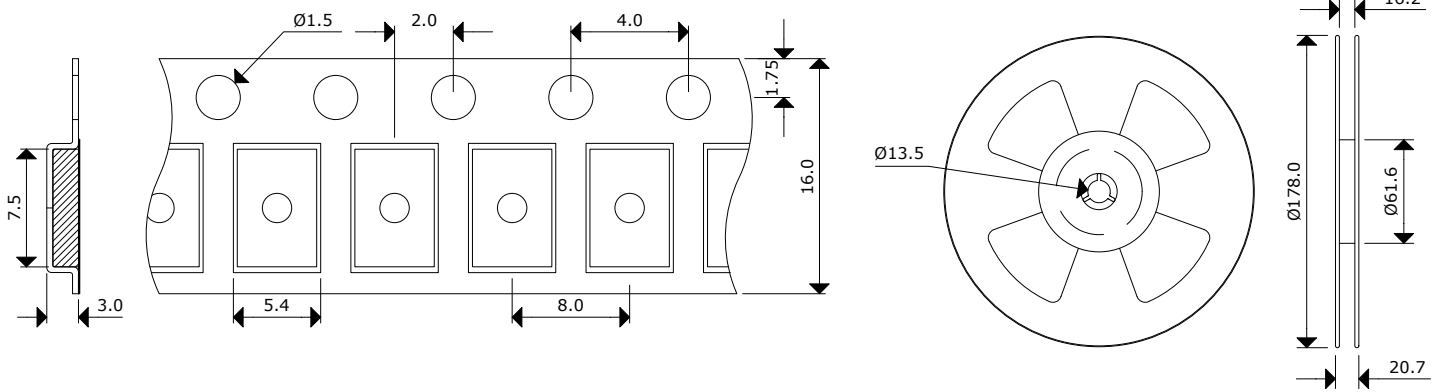
**Part Marking**



**Tape And Reel Dimensions**

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

600pcs/Reel



**Environmental & Mechanical Specifications**

Temperature Cycling	MIL-STD-883, Method 1010, Condition B	Mechanical Shock	100g;6ms; ½sine wave (directions X,Y,Z) IEC68-2-27 Test Ea/Severity 50A
Lead Integrity	MIL-STD-883, Method 2004	Resistance to Soldering	MIL-STD-202, Method 210, Condition A
Solderability	MIL-STD-883, Method 2003	Resistance to Solvents	MIL-STD-202, Method 215
Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz-2000Hz, one cycle per 30 min, test 2hrs. (3 times for each 3 directions X , Y , Z), IEC 68-2-06 Test Fc.		