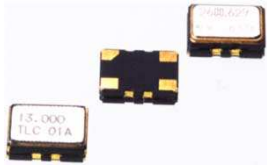


# High stability Packaged Crystal Oscillator (HPXO)

Temperature Compensated  
Metal Sealed  
Onechip IC

Pb-free : RoHs compliance



## HP-TC2520

### Typical applications

- Cellular Phone, Network equipment, etc.

### Features

- 4.000 to 54.000 MHz.
- C-MOS output with Tri-state function
- Temperature Compensated function
- Package : Metal lid + Ceramic package.
- 2.5×2.0×0.9mm

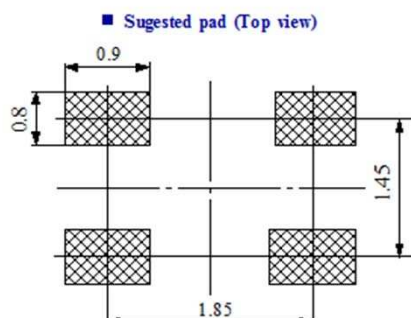
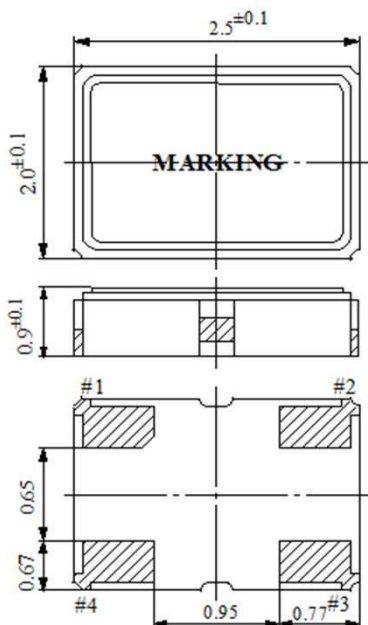
## Specifications

Model		HP-TC2520
Available Frequency Range		4.000 to 54.000 MHz
Frequency Stability	Tolerance (at 25° C)	±0.5 ppm
	Temperature (Ref. to 25° C)	±2.5 ppm (-30 to +75° C) , ±2.5ppm (-40 to +85° C)
	Supply Voltage Change	±0.2 ppm
	Load Change	±0.2 ppm
Power Supply Voltage		+1.8V, +2.5V, +3.0V, +3.3V
Current consumption		7.0 mA max.(3.1mA typ.) / 10µA max. (Standby)
Output	Voltage	VOL : 10%Vdd max / VOH : 90% Vdd min.
	Load	15 pF
	Waveform	C-MOS
Rise & Fall time		5ns max. / 10%Vdd -90%Vdd
Duty cycle		45% to 55% at 1/2Vdd
Tri-state Function		#1 N.C. or "H" : Output enable / #1 "L" : Output disable(Hi-Z)
Phase Noise / Jitter		-145 dBc/Hz typ. at 10KHz offset / 1σ 3ps typ
Storage Temperature Range		-40 to +85° C

## Environmental Characteristics

Description	Specification
Aging (at 25° C)	±1.0 ppm max / Year (at 25° C)
Fall Shock	Test : 3 time free drop onto concrete board from 150cm high Result: ±1.0 ppm max.
Vibration Shock	Test : Freq. 5-500Hz, Amplitude 1.5mm, Test time 4cycles/XYZ axis Result: ±1.0 ppm max.
Solderability	Test : Immersed into solder bath at 235±° C for 3 sec. Result: More than 95%
Humidity	Test : 90 to 95%RH at 60±3° C±500 hours Result: ±1.0 ppm max.
Reflow Heat	Test : 2 times of IR reflow soldering in accordance with reflow temperature profile as per the document No.:TR-0531 Result: ±1.0 ppm max.

## Outline Drawing & Suggested Pad



TERMINAL	CONNECTION	
#1	CE	
#2	GND	
#3	OUTPUT	
#4	Vdd	