



### Features

- 2520 size, 0.80mm high ultra miniature and lightweight SMD TCXO.
- Low voltage operation and low phase noise.
- Temperature Stability:  $\pm 0.5\text{ppm} \sim \pm 2.0\text{ppm}$ .
- Automatic mounting and reflow soldering.
- Voltage Control Function Available.
- Applications: GPS, WiMax, Cellular, Wireless communications, Smart Phone, etc.
- Single package structure.



### Electrical Specifications

Type		SMD 2520 TCXO
Output Type		Clipped Sine wave
Output Load		10k $\Omega$ // 10pF
Oscillation Mode		Fundamental
Supply Voltage		1.8~3.3V
Frequency Range		13MHz~52MHz
Clipped Sinewave Output Voltage		0.8 Vp-p Typical
Frequency Stability	Vs. Temperature (-30~+85°C)	$\pm 0.5 / \pm 2.0$ ppm
	Vs. Load (Load varies $\pm 10\%$ )	$\pm 0.2\text{ppm Max.}$
	Vs. Supply Voltage (Vcc = Typical $\pm 0.1\text{V}$ )	$\pm 0.2\text{ppm Max.}$
Frequency Tolerance	as 25°C after 2 Reflows with Typical Applied to Auto Frequency Control Pin	$\pm 2.5\text{ppm Max.}$
Slope of Frequency Drift		$\pm 0.1\text{ppm}/^\circ\text{C}$ Typical; $\pm 0.5\text{ppm}/^\circ\text{C}$ Max.
Operating Temperature Range		-30~+85°C
Auto Frequency Control (AFC) Range*		$\pm 7 \sim \pm 16\text{ppm}$ (1.4 $\pm 1\text{V}$ )
Supply Current		2.0mA Max.
Start-up Time		5ms Max.
Harmonics		-5dBc Max.
Phase Noise at 1kHz Offset		-130dBc/Hz
Aging (at 25°C)		$\pm 1\text{ppm/Year Max.}$

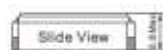
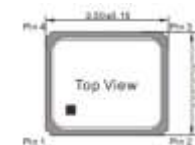
\*AFC Range is selective and disable is acceptable.

### Ordering Information

KTC2520	13000M	18	05	0	S
Product Code	Frequency Range 13.000MHz	Supply Voltage 18=1.8V 33=3.3V	Frequency Stability Vs. Temperature 05= $\pm 0.5\text{ppm}$ 20= $\pm 2.0\text{ppm}$	Voltage Control 0=no VC 1=VC	Output Type S=Clipped Sine wave

### Dimension

Units:mm



Pin Connection

Name	Connection
Pin 1	AFC or GND
Pin 2	GND
Pin 3	Output
Pin 4	VCC

Recommended Land Pattern

