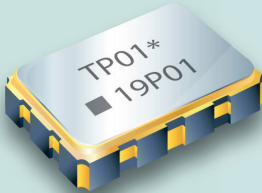


# Precise SMD Temperature Compensated Crystal Oscillators

## 5.0 x 3.2 x 1.5 mm 7P Series



### Features

- High Stability Over Temperature:  $\pm 0.1\text{ppm} \sim \pm 0.28\text{ppm}$
- Operating Temperature Range:  $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
- Holdover 24Hr:  $\pm 0.32\text{ppm}$  (Option)
- Free Run Stability for 20 years:  $\pm 4.6\text{ppm}$  (Option)
- Frequency: 10 ~ 52MHz
- Supply Voltage: 2.7V ~ 5.5V
- Voltage Control Function Available
- Output Enable/Disable Function Available
- Support Clipped Sinewave and CMOS Output Waveform
- Application: Small Cell, Base Station, Networking Infrastructure
- ROHS Compliant / Pb Free

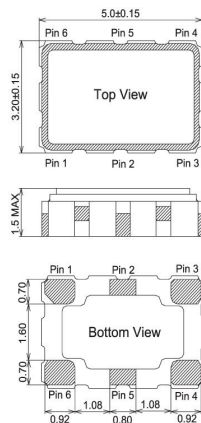
### Electrical Specifications

Item / Type		7P	
Output Type		Clipped Sinewave	CMOS
Output Load		10K $\Omega$ /10pF	15pF
Output Voltage		0.8 Vp-p Min.	Output Low (VOL) 0.1 * Vcc Max. Output High (VOH) 0.9 * Vcc Min.
Supply Current		5 mA Max.	10 mA Max.
Oscillation Mode		Fundamental	
Supply Voltage		2.7 ~ 5.5 V	
Frequency Range		10 ~ 52 MHz	
Initial Frequency Tolerance at 25°C after 2 Reflows		$\pm 2.0$ ppm	
Frequency Tolerance	Vs. Temperature ( - 40 ~ + 85 °C )	$\pm 0.28 / \pm 0.5 / \pm 2.0$ ppm	
	Vs. Load ( $\pm 5\%$ )	$\pm 0.1$ ppm Max.	
	Vs. Supply Voltage ( $\pm 5\%$ )	$\pm 0.1$ ppm Max.	
Storage Temperature Range		$-55 \sim +125^{\circ}\text{C}$	
Auto Frequency Control Range (Option)		$\pm 5 \sim \pm 16$ ppm (1.5 $\pm 1$ V)	
Start-up Time		2.5 ms Max.	
Harmonics		-5 dBc Max.	
Phase Noise at 1KHz Offset		-130 dBc/Hz	
Aging		$\pm 1$ ppm / year Max.	
24 Hr Holdover Stability (Option) [#1]		$\pm 40$ ppb	
Free Run Stability for 20 Years (Option) [#2]		$\pm 4.6$ ppm	

[#1] 24 hours at constant temperature after 48 hours operation.

[#2] Inclusive of initial tolerance at 25°C , temperature, supply voltage  $\pm 5\%$ , load  $\pm 5\%$ , reflow soldering and ageing 20 years.

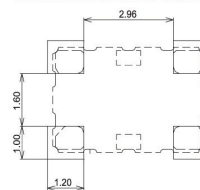
### Dimensions



#### Pin Connection

Name	Function
Pin 1	AFC or GND
Pin 2	NC
Pin 3	GND
Pin 4	OUTPUT
Pin 5	NC
Pin 6	VCC

#### Recommended Land Pattern



Units: mm