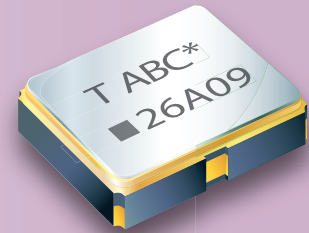


SMD Temperature Compensated Crystal Oscillators

2.5 x 2.0 x 0.8 mm AL Series

Features

- Temperature Stability: ± 0.5 ppm ~ ± 2.5 ppm.
- Operating Temperature Range: -40 °C ~ 105 °C.
- Supply Voltage: 1.68 V ~ 3.63 V.
- Voltage Control Function Available.
- Frequencies: 6 MHz ~ 52 MHz.
- Applications: GPS, WiMAX, LTE and Wifi Communications.
- RoHS Compliant/Pb Free.
- AEC-Q200/AEC-Q100 Compliant.

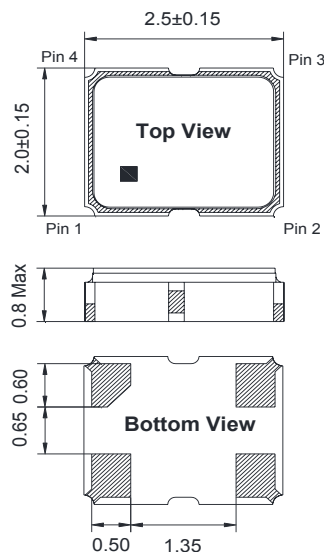


Electrical Specifications

Item / Type		AL
Output Type		Clipped Sinewave
Output Load		$10\text{ K}\Omega // 10\text{ pF}$ and $5\text{ K}\Omega // 40\text{ pF}$
Oscillation Mode		Fundamental
Supply Voltage		$1.68 \sim 3.63\text{ V}$
Frequency Range		$6 \sim 52\text{ MHz}$
Clipped Sinewave Output Voltage		0.8 Vp-p typical
Frequency Stability	Vs. Temperature ($-40 \sim +85$ °C)	$\pm 0.5 / \pm 2.5\text{ ppm}$
	Vs. Temperature ($-40 \sim +105$ °C)	
	Vs. Load (Load varies $\pm 10\%$)	$\pm 0.2\text{ ppm Max.}$
	Vs. Supply Voltage ($V_{cc} = \text{Typical} \pm 0.1\text{ V}$)	$\pm 0.2\text{ ppm Max.}$
Frequency Tolerance	at 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.
Storage Temperature Range		$-55 \sim +125$ °C
Auto Frequency Control (AFC) Range *		$\pm 5\text{ ppm} \sim \pm 16\text{ ppm}$
Supply Current		2.5 mA Max.
Start-up Time		3 ms Max.
Harmonics		-5 dBc Max.
Phase Noise at 1 kHz offset		-130 dBc / Hz
Aging (at 25 °C)		$\pm 1\text{ ppm / year Max.}$

* AFC Range is selective and disable is acceptable.

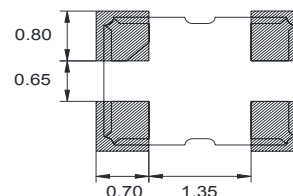
Dimensions



Pin Connection

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

Recommended Land Pattern



Units: mm