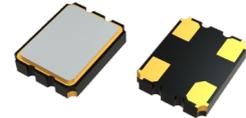


3.2 × 2.5 mm Ultra Low Noise SMD Crystal Oscillator

Feature

- Typical 3.2 x 2.5 x 0.95 mm SMD package.
- Ultra Low Phase Noise designed specifically for Hi-Resolution Audio (HiFi, HD Audio)
- F=45.1584MHz(@1.8V,25°C):typical low close-in phase noise of-100dBc/Hz@10Hz-offset, -127dBc/Hz@100Hz-offset,and a noise floor of-157dBc/Hz
- F=49.152MHz(@1.8V,25°C):typical low close-in phase noise of-100dBc/Hz@10Hz-offset, -128dBc/Hz@100Hz-offset,and a noise floor of-157dBc/Hz
- Wide operating temperature range:-40°C~+105°C

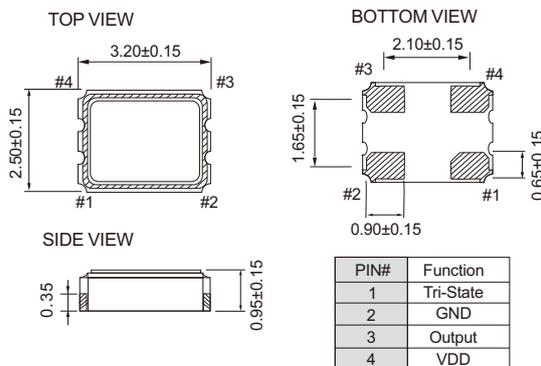


Electrical Specifications

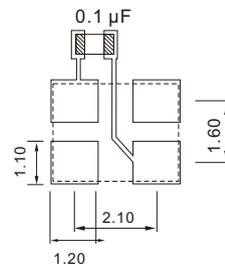
Parameter	3.3V		2.5V		1.8V		Unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation	2.97	3.63	2.25	2.75	1.62	1.98	V
Frequency Range	20	60	20	60	20	60	MHz
Supply Current	-	8	-	7	-	5	mA
Duty Cycle	45	55	45	55	45	55	%
Transition Time :Rise/Fall Time	-	6	-	6	-	6	nSec
Output Level (CMOS)	Out High(Logic"1")	2.97	2.25	1.62			V
	Out Low(Logic"0")		0.33	0.25	0.18		
Start Time	-	2	-	2	-	2	mSec
Tri-State (Input to Pin 1)	Enable(High Voltage or floating)	2.31	-	1.75	-	1.26	V
	Disable(Low Voltage or GND)	-	0.99	-	0.75	-	
RMS Phase Jitter (Integrated12KHz to 20MHz)	-	0.5	-	0.5	-	0.5	pSec
Phase Noise (TYP.)	F=20MHz		F=40MHz		F=60MHz		dBc/Hz
1.8V, 25°C	1KHz offset	-147	-143	-139			dBc/Hz
	100KHz offset	-156	-154	-150			dBc/Hz
2.5 to 3.3V, 25°C	1KHz offset	-151	-148	-142			dBc/Hz
	100KHz offset	-157	-156	-156			dBc/Hz
Aging(@25°C 1st year)	-	±3	-	±3	-	±3	ppm
Storage Temp. Range	-55	125	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position
 .+ Transition times are measured between 10% and 90% of VDD, with an output load of 15pF.

Dimension(mm)



Solder Pad Layout(mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1 µF as close to the part as possible between Vdd and GND pads.

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C) \ ppm	±20	±25	±30	±50
-10 ~ +60	○	○	○	○
-20 ~ +70	△	○	○	○
-40 ~ +85	X	○	○	○
-40 ~ +105	X	X	△	○

○: Available △:Conditional X: Not available
 Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1st year), shock, and vibration