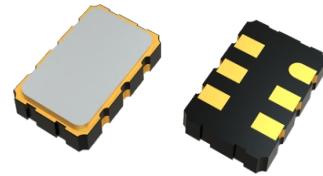


5.0 x 3.2 mm SMD Differential Output Voltage Controlled Crystal Oscillator

Feature

- Differential output: LVPECL, LVDS
- Frequency support from 10MHz to 1.5GHz
- Low phase jitter typical:<1ps RMS from 12kHz to 20MHz
- Wide frequency control range
- Pb-free/RoHS compliant



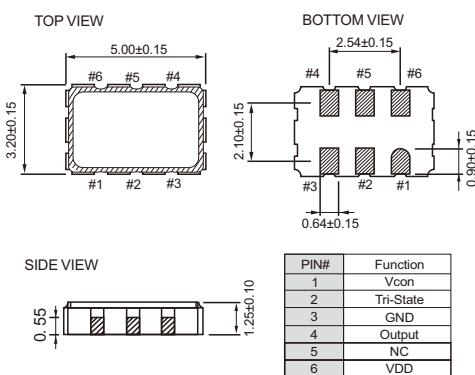
Electrical Specifications

Parameter	LVPECL								Unit	
	3.3V		2.5V		3.3V		2.5V			
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V	
Frequency Range	10	1500	10	1500	10	1500	10	1500	MHz	
Supply Current	10MHz \leq FO < 160MHz	-	75	-	75	-	50	-	50	
	160MHz \leq FO < 1500MHz	-	100	-	100	-	75	-	75	
Duty Cycle	45	55	45	55	45	55	45	55	%	
Transition Time : Rise/Fall Time	-	1.0	-	1.0	-	1.0	-	1.0	nSec	
Output Level	Out High(Logic"1")	2.27		2.27			1.6		1.6	
	Out Low(Logic"0")		1.7		1.7	0.9		0.9	V	
Start Time	-	10	-	10	-	10	-	10	mSec	
Tri-State	Enable(High Voltage or floating)	0.7V _{DD}	-	0.7V _{DD}	-	0.7V _{DD}	-	0.7V _{DD}	V	
(Input to Pin 2)	Disable(Low Voltage or GND)	-	0.3 V _{DD}							
RMS Phase Jitter (integrated12KHz to 20MHz)	1		1		1		1		pSec	
Control Voltage Function on Pin1										
Control Voltage Center	1.65		1.25		1.65		1.25		V	
Control Voltage Range	0.3	3	0.3	3	0.3	3	0.3	3	V	
Absolute Pulling Range (APR)	± 50		± 50		± 50		± 50		ppm	
Linearity		10		10		10		10	%	
Modulation Bandwidth	10	-	10	-	10	-	10	-	kHz	
VC Input Impedance	1	-	1	-	1	-	1	-	MΩ	
Aging(@25 1st year)	-	± 3	-	± 3	-	± 3	-	± 3	ppm	
Storage Temp. Range	-55	125	-55	125	-55	125	-55	125	°C	

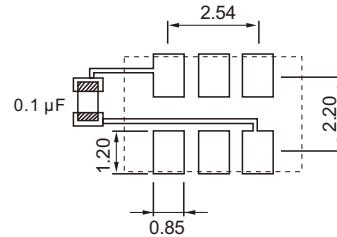
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position

+ Transition times are measured between 20% and 80% of VDD.

Dimension(mm)



Solder Pad Layout(mm)



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

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	± 25	± 50
-10 ~ +60	O	O	
-20 ~ +70	△	O	
-40 ~ +85	△	O	

o: Available △: Conditional X: Not available

Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1 st year), shock, and vibration