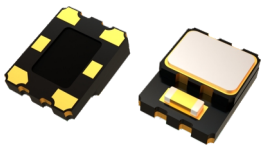
3.2x2.5mm High Frequency Temperature Compensated Crystal Oscillator

Feature

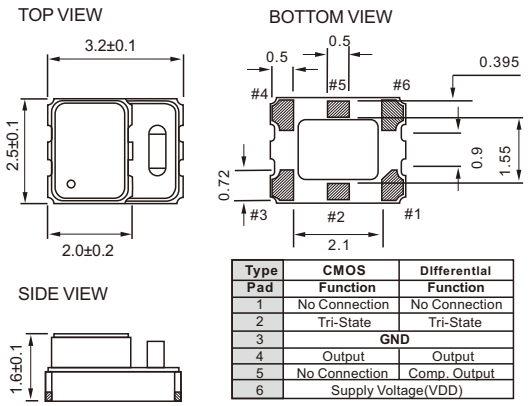
- Low power supply voltage:3.3V and 2.5V options
- Clock output:CMOS, LVPECL,LVDS options
- CMOS output frequency support from 10MHz TO 250MHz
- Differential output frequency supports from10MHz to 1.5GHz
- Low Phase Jitter typical 0.8 pS RMS at 12KHz to 20MHz frequency offsets
- Low current consumption, Pb-free/RoHS compliant
- Frequency Stability ±2.0ppm over -40°C to 85°C



Electrical Specifications

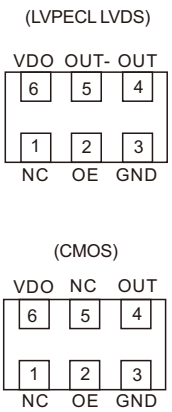
Parameter		LVPECL		LVDS		CMOS		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage		3.3V or 2.5V						V
Supply Voltage Variation		V_{DD}-5%	V_{DD}+5%	V_{DD}-5%	V_{DD}+5%	V_{DD}-5%	V_{DD}+5%	
Frequency Range		10	1500	10	1500	10	250	MHz
Supply Current		-	54	-	45	-	40	mA
Output Level	Output High	V_{DD}-1.03	V_{DD}-0.6		1.6	90%V_{DD}		V
	Output Low	V_{DD}-1.85	V_{DD}-1.6	0.9	-		10%V_{DD}	
Transition Time(Rise/ Fall Time)		-	0.5(20-80%)	-	1.0(20-80%)	-	3.0(20-80%)	nSec
Duty Cycle		45	55	45	55	45	55	%
Start time		-	5	-	5	-	5	mSec
Tri-State mode (input to pin 2)	Enable	70%V_{DD}	-	70%V_{DD}	-	70%V_{DD}	-	
	Disable		30%V_{DD}		30%V_{DD}		30%V_{DD}	
Stand by Curent		-	20	-	20	-	20	mA
Output Loading		50Ω into V_{DD}-2V		100Ω		15pF		
Phase Noise		Typ.	Max.	Typ.	Max.	Typ.	Max.	
At VDD=3.3V, F out=250MHz	1kHz offset	-107	-	-107	-	-107	-	dBc/Hz
	10kHz offset	-111	-	-111	-	-111	-	
	100kHz offset	-114	-	-114	-	-114	-	
	1MHz offset	-125	-	-125	-	-125	-	
	20MHz offset	-147	-	-147	-	-147	-	
RMS Phase Jitter(12KHz to 20MHz)		0.8	1.5	0.8	1.5	0.8	1.5	pSec

Dimension(mm)

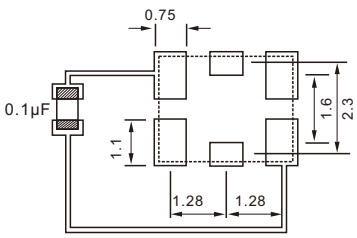


Type	CMOS	Differential
Pad	Function	Function
1	No Connection	No Connection
2	Tri-State	Tri-State
3	GND	
4	Output	Output
5	No Connection	Comp. Output
6	Supply Voltage(VDD)	

PIN Assignments



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

ppm / Temp. (°C)	±1.0	±2.0	±2.5
-30 ~ +85	○	○	○
-40 ~ +85	△	○	○

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

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