



### Features and Benefits

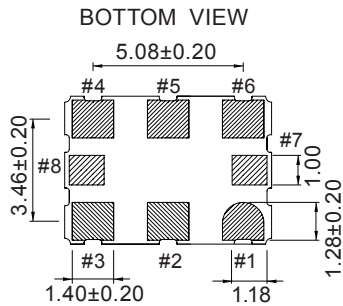
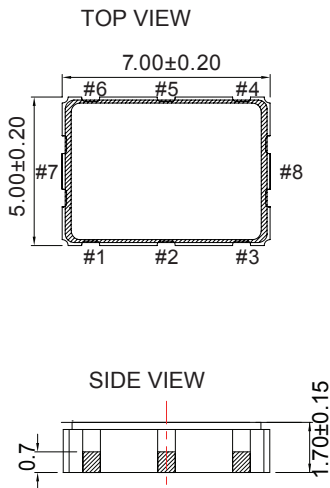
- Low Power Supply Voltage: 3.3, 2.5V supply options
- Clock Output: LVPECL
- Output frequency support from 15MHz to 2.1GHz
- Ultra Low Noise, Phase Jitter < 300 fs  
(Typical: 150 fs at 12kHz to 20MHz frequency offsets)
- Tri-state enable / disable mode.
- Temperature Range: -40°C to +85°C
- Pb-free/RoHS Compliant

### Typical Applications

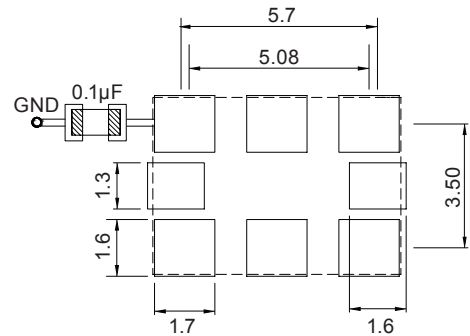
- SONET/SDH, Gigabit Ethernet
- Storage Area Networking (SAN)
- SD/HD video
- FPGA clock generation

### Mechanical Drawing & Pin Connections

**Drawing No: MD200033-1**



Solder PAD Layout



Pin Assignment

Pin#	Functions
	LVPECL/LVDS/CML
1	NC
2	OE
3	GND
4	Output
5	Comp. Output
6	V <sub>DD</sub>
7	NC
8	NC

To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between V<sub>DD</sub> and GND pads.

Unit in mm  
1mm = 0.0394 inches



**Specifications**

Specification	Conditon	3.3V		2.5V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation		$V_{DD} - 10\%$	$V_{DD} + 10\%$	$V_{DD} - 10\%$	$V_{DD} + 10\%$	V
Frequency Range		15	2100	15	2100	MHz
Standard Frequency		100, 106.25, 125, 156.25, 187.5, 200, 212.5, 266, 300, 312.5, 400				MHz
Supply Current		-	110	-	95	mA
Duty Cycle		45	55	45	55	%
Output Level	Output High	$V_{DD} - 1.165$	$V_{DD} - 0.8$	$V_{DD} - 1.165$	$V_{DD} - 0.8$	V
	Output Low	$V_{DD} - 2.0$	$V_{DD} - 1.55$	$V_{DD} - 2.0$	$V_{DD} - 1.55$	
Transition Rise/Fall Time		-	0.35	-	0.35	nSec
Start Time		-	8	-	8	mSec
Tri-State(Input to Pin2)	Enable	$0.7x V_{DD}$	-	$0.7x V_{DD}$	-	V
	Disable	-	$0.3x V_{DD}$	-	$0.3x V_{DD}$	
Standby Current		-	110	-	95	mA
RMS Phase Jitter (12KHz to 20MHz)		150	300	150	300	fs
Period Jitter		-	50	-	50	ps
Phase Noise, At $V_{DD}=3.3V$ , $f_{out}=873.515MHz$		TYP	MAX	TYP	MAX	
	1KHz offset	-106	-	-106		dBc/Hz
	10KHz offset	-115	-	-115		dBc/Hz
	100KHz offset	-123	-	-123		dBc/Hz
	1MHz offset	-133	-	-133		dBc/Hz
	20MHz offset	-150	-	-150		dBc/Hz

**Frequency Stability vs. Temperature**

	±20PPM	±25PPM	±30PPM	±50PPM
-20°C to +70°C	Conditional	Available	Available	Available
-40°C to +85°C	Not Available	Conditional	Available	Available

Note: Inclusive of calibration @25°C, operating temperature range, input voltage variation, load variation, aging (1<sup>st</sup> year), shock and vibration.