



Features and Benefits

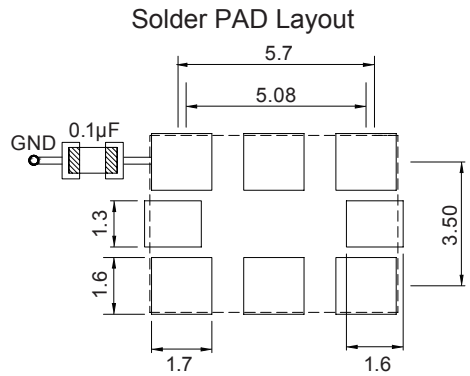
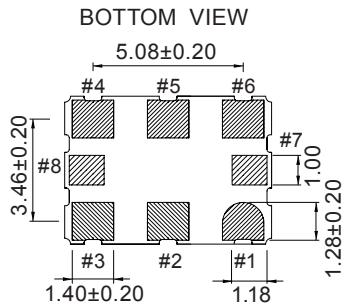
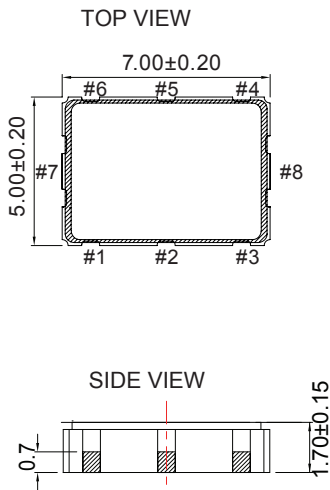
- Low Power Supply Voltage: 3.3, 2.5, 1.8V supply options
- Clock Output: CML
- Output frequency support from 15MHz to 2.1GHz
- Ultra Low Noise, Phase Jitter < 300 fs
(Typical: 150 fs at 12kHz to 20MHz frequency offsets)
- Tri-state enable / disable mode.
- Temperature Range: -40°C to +85°C
- Pb-free/RoHS 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



Pin Assignment

Pin#	Functions
	LVPECL/LVDS/CML
1	NC
2	OE
3	GND
4	Output
5	Comp. Output
6	V _{DD}
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_{DD} and GND pads.

Unit in mm
1mm = 0.0394 inches



Specifications

Specification	Condition	3.3V		2.5V		1.8V		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation	$V_{DD} \pm 5\%$	-	-	-	-	1.71	1.89	V
Supply Voltage Variation	$V_{DD} \pm 10\%$	3.63	2.97	2.25	2.75	-	-	V
Frequency Range		15	2100	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		-	90	-	80	-	70	mA
Duty Cycle		45	55	45	55	45	55	%
Output Level	Output High	$V_{DD} - 0.085$	V_{DD}	$V_{DD} - 0.085$	V_{DD}	$V_{DD} - 0.085$	V_{DD}	V
	Output Low	$V_{DD} - 0.6$	$V_{DD} - 0.32$	$V_{DD} - 0.6$	$V_{DD} - 0.32$	$V_{DD} - 0.6$	$V_{DD} - 0.32$	
Transition Rise/Fall Time	20%-80%	-	0.35	-	0.35	-	0.35	nSec
Start Time		-	8	-	8	-	8	mSec
Tri-State(Input to Pin2)	Enable	$0.7 \times V_{DD}$	-	$0.7 \times V_{DD}$	-	$0.7 \times V_{DD}$	-	V
	Disable	-	$0.3 \times V_{DD}$	-	$0.3 \times V_{DD}$	-	$0.3 \times V_{DD}$	
Standby Current		-	90	-	80	-	70	mA
RMS Phase Jitter (12KHz to 20MHz)		150	300	150	300	150	300	fs
Period Jitter		-	50	-	50	-	50	ps
Phase Noise, At $V_{DD}=3.3V$, $f_{out}=873.515MHz$		TYP	MAX	TYP	MAX	TYP	MAX	
	1KHz offset	-107	-	-107	-	-107	-	dBc/Hz
	10KHz offset	-117	-	-117	-	-117	-	dBc/Hz
	100KHz offset	-125	-	-125	-	-125	-	dBc/Hz
	1MHz offset	-135	-	-135	-	-135	-	dBc/Hz
	10MHz offset	-150	-	-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 (1st year), shock and vibration.