

VT Type

7.0 x 5.0 mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator

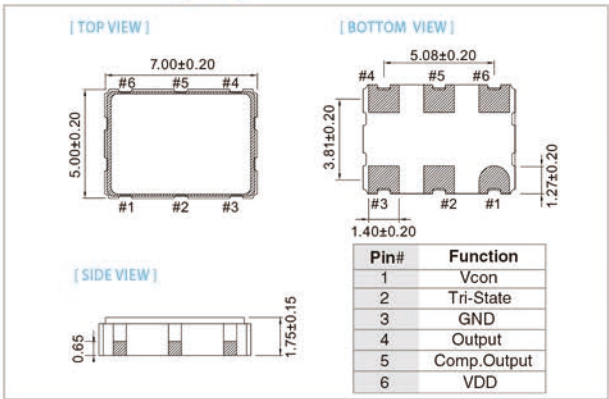
FEATURE

- Typical 7.0 x 5.0 x 1.75 mm 6 pads ceramic SMD package.
- Very low jitter performance: typical 0.3 pS RMS from 12k-20MHz.
- Wide frequency control range.
- Complementary Output.
- Tri-state enable/disable

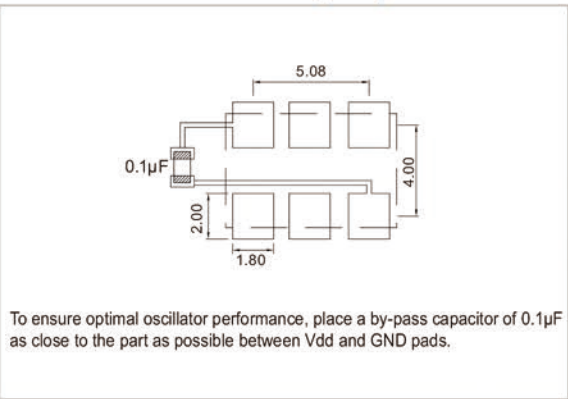
TYPICAL APPLICATION

- Set-top Box, HDTV
- WiMAX/WLAN
- xDSL/ VoIP, Cable modem
- Jitter Attenuator, ADC

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter		LVPECL				LVDS				Unit
		3.3 V		2.5V		3.3 V		2.5V		
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		1.5	200	65	200	1.5	200	65	200	MHz
Standard Frequency		77.76, 106.25, 122.88, 125, 155.52, 156.25, 200								
Absolute Pulling Range (APR)		±50	—	±50	—	±50	—	±50	—	ppm
Control Voltage Range		0.3	3.0	0	2.5	0.3	3.0	0	2.5	V
Supply Current	1.5 MHz ≤ Fo < 65 MHz	—	75	—	75	—	45	—	45	mA
	65 MHz ≤ Fo ≤ 200 MHz	—	100	—	100	—	80	—	80	
Output Level	Output High	2.275	—	1.475	—	—	1.6	—	1.6	V
	Output Low	—	1.68	—	1.095	0.9	—	0.9	—	
Transition Time: Rise/Fall Time+		—	1.0	—	1.0	—	1.0	—	1.0	nSec
Start Time		—	3	—	3	—	3	—	3	mSec
Tri-State (input to Pin 2, Enable High)										
Enable (High voltage or floating)		2.31	—	1.75	—	2.31	—	1.75	—	V
Disable (Low voltage or GND)		—	0.99	—	0.75	—	0.99	—	0.75	
Linearity		—	10	—	10	—	10	—	10	%
Modulation Bandwidth (BW)		15	—	15	—	15	—	15	—	kHz
Input Impedance		10000	—	10000	—	10000	—	10000	—	kΩ
RMS Phase Jitter (Integrated 12kHz-20MHz)										
Fo < 100 MHz		—	1	—	1	—	1	—	1	pSec
100 MHz ≤ Fo < 125 MHz		—	0.7	—	0.7	—	0.7	—	0.7	
125 MHz ≤ Fo < 150 MHz		—	0.5	—	0.5	—	0.5	—	0.5	
150 MHz ≤ Fo		—	0.3	—	0.3	—	0.3	—	0.3	
Phase Noise@153.6 MHz	100 Hz	-85		-85		-85		-85		dBc/Hz
	1 kHz	-115		-115		-115		-115		
	10 kHz	-130		-130		-130		-130		
Aging (@ 25°C 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.

FREQ. STABILITY vs. TEMP. RANGE

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

* ○: Available △: Conditional X: Not available

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

Note: not all combination of options are available. Other specifications may be available upon request.

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