

VT Type

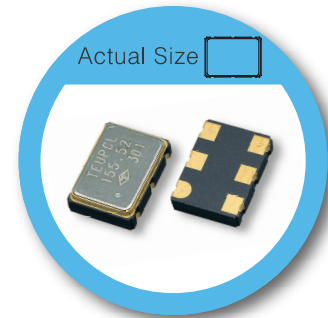
7.0 x 5.0 mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator

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

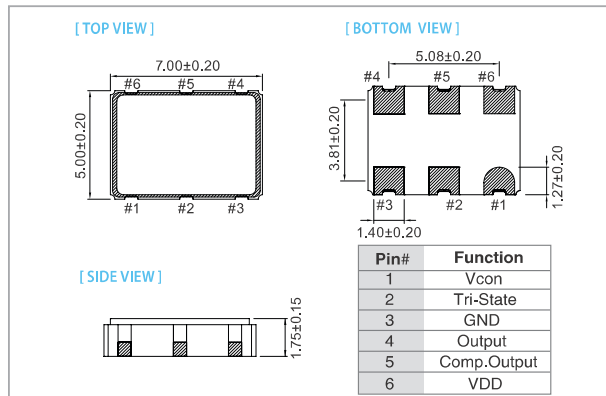
TYPICAL APPLICATION

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

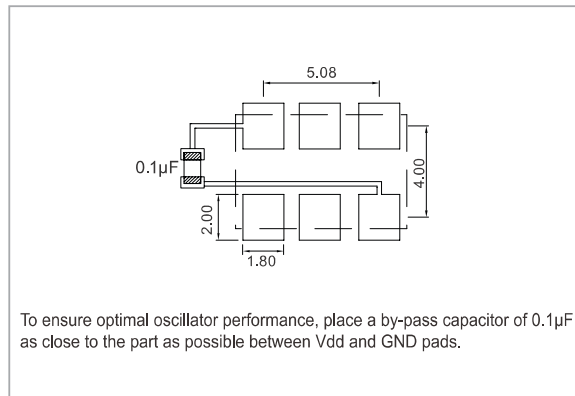


RoHS Compliant

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) ±5%	3.135	3.465	2.375	2.625	3.135	3.465	2.375	2.625	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 (Logic"1")	2.275	—	1.475	—	1.6	—	1.6	V	
	Output Low (Logic"0")	—	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)									V	
Enable (High voltage or floating)	2.31	—	1.75	—	2.31	—	1.75	—		
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	5000	—	5000	—	5000	—	5000	—	kΩ	
RMS Phase Jitter (Integrated 12kHz~20MHz)									pSec	
Fo < 100 MHz	—	1	—	1	—	1	—	1		
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	-85	-85	-85	dBc/Hz	
	1 kHz	-115	-115	-115	-115	-115	-115	-115		
	10 kHz	-130	-130	-130	-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.

Rev(16)03/2016

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Specifications subject to change without notice.