

VT Type

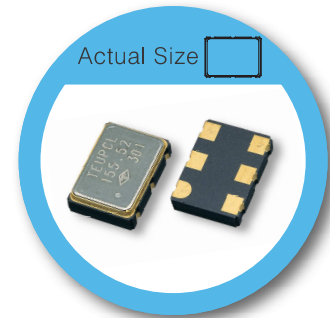
7.0 x 5.0 mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator

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

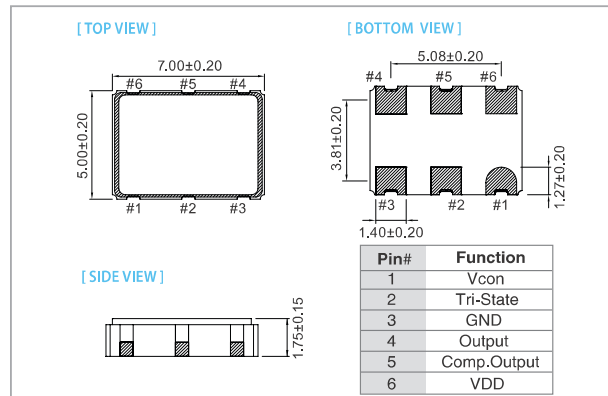
TYPICAL APPLICATION

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

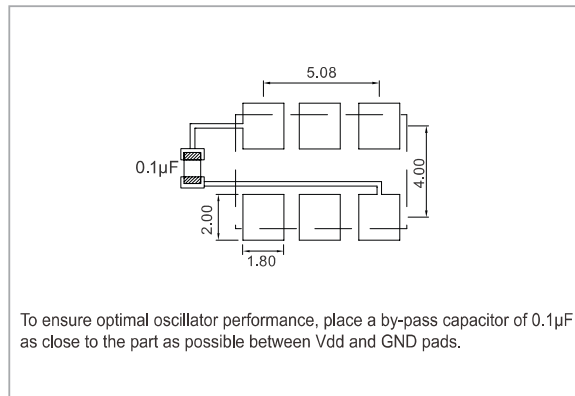


RoHS Compliant

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)	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		-		1.5 MHz ≤ Fo < 65 MHz		-		mA
	65 MHz ≤ Fo ≤ 200 MHz		-		65 MHz ≤ Fo ≤ 200 MHz		-		
Output Level	Output High (Logic"1")		1.475		Output High (Logic"1")		1.6		V
	Output Low (Logic"0")		-		Output Low (Logic"0")		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		100 Hz		-85		dBc/Hz
	1 kHz		-115		1 kHz		-115		
	10 kHz		-130		10 kHz		-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)	±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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www.tai tien.com

sales@tai tien.com.tw