

VT-A Type

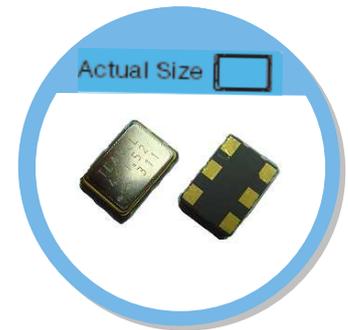
7.0 x 5.0 mm SMD Analog Frequency Multiplier Differential Output Voltage Controlled Crystal Oscillator

FEATURE

- Typical 7.0 x 5.0 x 1.5 mm hermetically sealed ceramic package.
- Very low jitter performance < 0.1 pS RMS from 12k-20MHz.
- Output frequency up to 800 MHz.
- Tri-state enable/disable.
- LVPECL output.

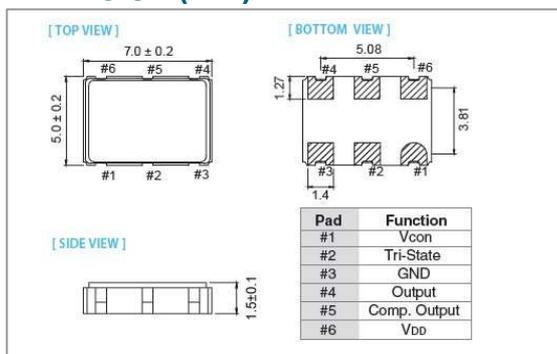
TYPICAL APPLICATION

- Telecommunications such as SONET / SDH / DWDM / FEC / SERDES / OC-3 thru OC-192
- Wireless base stations / WLAN / Gigabit Ethernet
- Clock and Data Recovery
- Low Jitter Clock Generation
- Avionic Flight Controls

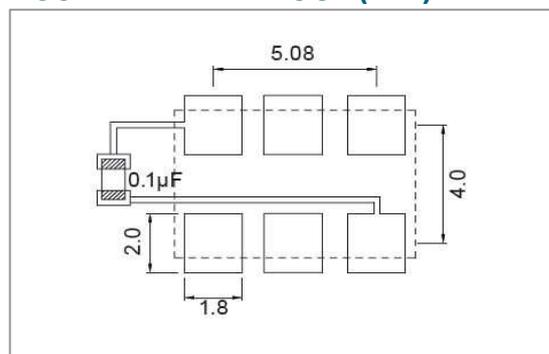


RoHS Compliant Standard

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	PECL		Unit
	3.3 V		
	Min.	Max.	
Supply Voltage Variation (VDD) 5%	3.135	3.465	V
Frequency Range	120	800	MHz
Standard Frequency	245.76, 491.52, 614.4, 622.08		
Absolute Pulling Range (APR)	±50	-	ppm
Control Voltage Range	0.3	3.0	V
Supply Current 120MHz ≤ F0 ≤ 800MHz	-	100	mA
Output Level Output High (Logic "1")	2.275	-	V
Output Low (Logic "0")	-	1.68	
Transition Time: Rise/Fall Time+	-	1.0	nSec
Start Time	-	3	mSec
Tri-State(Input to Pin 2)			
Enable (High voltage or floating)	0.7VDD	-	V
Disable (Low voltage or GND)	-	0.3VDD	
Linearity	-	10	%
Modulation Bandwidth (BW)	40	-	KHz
Input Impedance	130	-	KΩ
RMS Phase Jitter integrated 12KHz ~ 20MHz (622.08MHz)	-	0.1	pSec
50KHz ~ 80MHz (622.08MHz)	-	0.15	
Phase Noise (622.08MHz) 100 Hz	-	-70	dBc/Hz
1 KHz	-	-100	
10 KHz	-	-120	
Aging	-	±3	ppm
Storage Temp. Range	-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

Packing: Tape & Reel, 1000pcs per Reel

FREQ. STABILITY vs. TEMP. RANGE

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

* O: Standard △: Available (case by case) X: Not available

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