

VK Type

14.2 x 9.3 mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator

FEATURE

- Typical 14.2 X 9.3 x 5.4 mm 6 pads ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Wide frequency control range.
- Low phase jitter (Max: 0.5 pSec).
- Complementary Output.

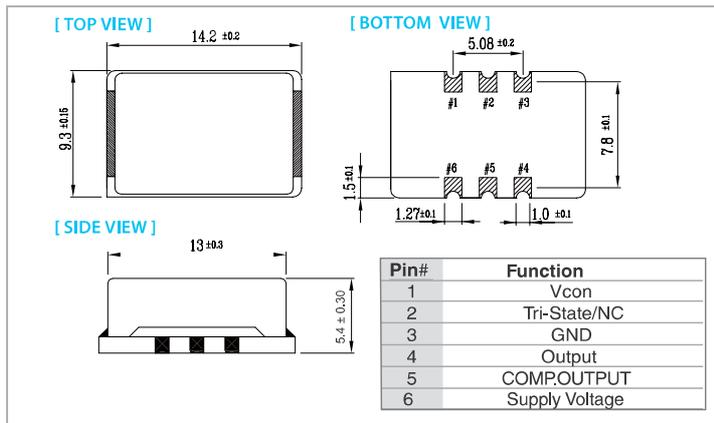


RoHS Compliant

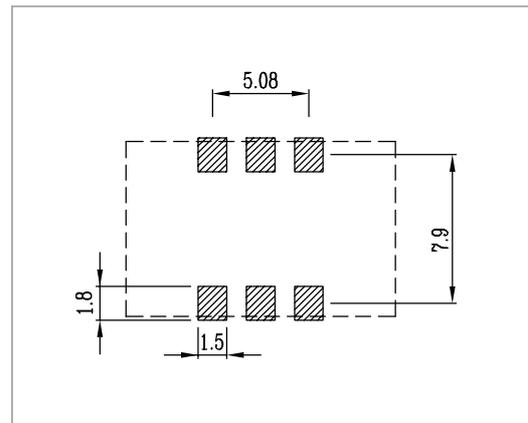
TYPICAL APPLICATION

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

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								MHz
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	mA
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	-	V
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 Low)									
Enable (Low voltage or GND or floating)	-	0.99	-	0.75	-	0.99	-	0.75	V
Disable (Low voltage or GND)	2.31	-	1.75	-	2.31	-	1.75	-	V
Linearity	-	10	-	10	-	10	-	10	%
Modulation Bandwidth (BW)	25	-	25	-	25	-	25	-	kHz
Input Impedance	5000	-	5000	-	5000	-	5000	-	kΩ
RMS Phase Jitter (Integrated 12 kHz~20 MHz)									
Fo < 100 MHz	-	1	-	1	-	1	-	1	pSec
100 MHz ≤ Fo < 125 MHz	-	0.7	-	0.7	-	0.7	-	0.7	pSec
125 MHz ≤ Fo < 150 MHz	-	0.5	-	0.5	-	0.5	-	0.5	pSec
150 MHz ≤ Fo	-	0.3	-	0.3	-	0.3	-	0.3	pSec
Phase Noise@155.52 MHz 100 Hz	-85		-85		-85		-85		dBc/Hz
1 kHz	-110		-110		-110		-110		
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.

Rev(14)05/2015

www.taitien.com

sales@taitien.com.tw

Specifications subject to change without notice.