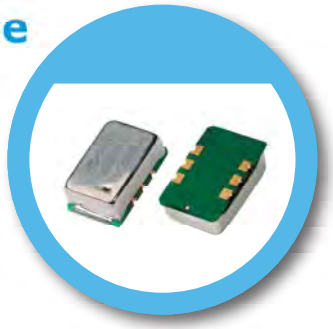
TAITIEN
Our Performance, Your Reputation

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

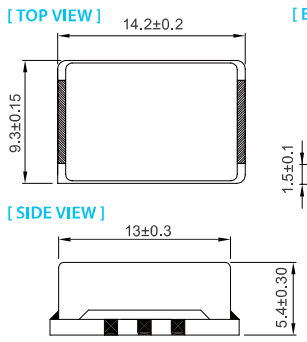


RoHS Compliant

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.

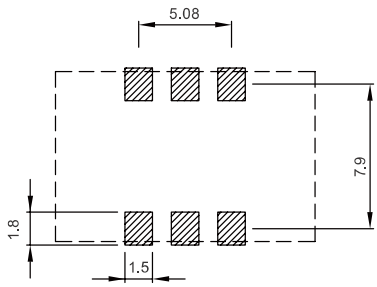
TYPICAL APPLICATION
- Set-top Box, HDTV
- WiMAX/WLAN
- xDSL/ VoIP, Cable modem

DIMENSION (mm)



Pin#	Function
1	Vcon
2	Tri-State/NC
3	GND
4	Output
5	COMP.OUTPUT
6	Supply Voltage

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	30	250	30	250	30	250	30	250	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 30 MHz ≦ Fo< 65 MHz	–	75	–	75	–	45	–	45	mA
65 MHz ≦ Fo≦ 250 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 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	–	
Linearity	–	10	–	10	–	10	–	10	%
Modulation Bandwidth (BW)	15	–	15	–	15	–	15	–	kHz
Input Impedance	10000	–	10000	–	10000	–	10000	–	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	
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@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

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