RADITEK VC14 SERIES VOLTAGE CONTROLLED CRYSTAL OSCILLATOR

FEATURES

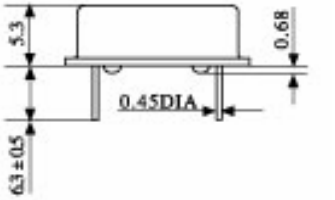
■Wide Frequency Range up to 160MHz
■Frequency Stability ±5PPM
■High Reliability
■TTL, HCMOS, ACMOS, Clipping Sine Wave, Sine Wave

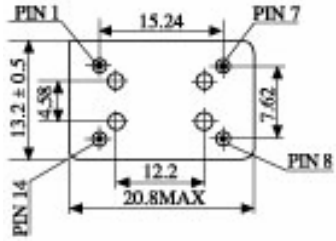
APPLICATIONS

■SDH/SONET
■ATM
■WLL
■Measurement Equipment
■PLL Circuits

SPECIFICATIONS

Frequency Range	1~160MHz
Frequency Stability (FS)	See Table 1
Absolute Pull Range (APR)	See Table 1
Output Waveform and Load Characteristics	Clipping Sine Wave, TTL, HCMOS, ACMOS, PECL (See Table 2)
Control Voltage Range	0.5VDC~4.5VDC
Center Frequency	+2.5VDC, ±0.25VDC
Linearity	<±10%
Input Impedance	≥50k ohm
Modulation Bandwidth	<15kHz
Supply Voltage	+3.3VDC, +5.0VDC, ±5%
Supply Current	<50MHz, 25mA (max.) <90MHz, 40mA (max.) <125MHz, 60mA (max.)
Package	DIP14
Storage Temperature Range	-40~+100°C





PIN FUNCTION:
PIN1 – Control Voltage
PIN7 – GND/Case
PIN8 – Output
PIN14 – Power Supply

ABSOLUTE PULL RANGE AND TEMMPERATURE-FREQUENCY CHARACTERISTICS (TFC) – TABLE 1

Code	Temperature	Pull Range	TFC	Code	Temperature	Pull Range	TFC
A	0 - +70°C	±100PPM Min.	± 5PPM	N	0 - +70°C	±250PPM Min.	±30PPM
B	0 - +70°C	±100PPM Min.	±10PPM	O	-20 - +70°C	±100PPM Min.	±10PPM
C	0 - +70°C	±100PPM Min.	±20PPM	P	-20 - +70°C	±100PPM Min.	±20PPM
D	0 - +70°C	±100PPM Min.	±30PPM	Q	-20 - +70°C	±100PPM Min.	±30PPM
E	0 - +70°C	±150PPM Min.	± 5PPM	R	-20 - +70°C	±150PPM Min.	±10PPM
F	0 - +70°C	±150PPM Min.	±10PPM	S	-20 - +70°C	±150PPM Min.	±20PPM
G	0 - +70°C	±150PPM Min.	±20PPM	T	-20 - +70°C	±150PPM Min.	±30PPM
H	0 - +70°C	±150PPM Min.	±30PPM	U	-20 - +70°C	±200PPM Min.	±20PPM
I	0 - +70°C	±200PPM Min.	±10PPM	V	-20 - +70°C	±200PPM Min.	±30PPM
J	0 - +70°C	±200PPM Min.	±20PPM	W	-20 - +70°C	±200PPM Min.	±40PPM
K	0 - +70°C	±200PPM Min.	±30PPM	X	-20 - +70°C	±250PPM Min.	±20PPM
L	0 - +70°C	±250PPM Min.	±10PPM	Y	-20 - +70°C	±250PPM Min.	±30PPM
M	0 - +70°C	±250PPM Min.	±20PPM	Z	-20 - +70°C	±250PPM Min.	±40PPM

OUTPUT WAVEFORM AND LOAD CHARACTERISTIS – TABLE 2

Output Waveform	Output Type Code	Frequency Range	Oscillation State	Output Characteristics
Clipping Sine Wave	0	8MHz - 40MHz 40MHz – 160MHz	F: Fundamental O: Overtone	Load: 10kΩ/10pF Output level: >1Vp-p
TTL	1	1MHz - 40MHz 40MHz – 160MHz	F: Fundamental O: Overtone	Load: Max. 10 low power consumption TTL gates "1" level: >+2.4VDC; "0" level: <+0.2VDC Duty cycle: 45/55 Rise/fall time: <6ns
HCMOS	2	1MHz - 40MHz 40MHz – 160MHz	F: Fundamental O: Overtone	Load: Max. 10 low power consumption TTL/HCMOS "1" level: >+4.5VDC; "0" level: <+0.5VDC Duty cycle: 45/55 Rise/fall time: <6ns
ACMOS	3	1MHz - 40MHz 40MHz - 160MHz	F: Fundamental O: Overtone	Load: Max. 10 low power consumption TTL/ACMOS "1" level: >+4.5VDC; "0" level: <+0.5VDC Duty cycle: 45/55 Rise/fall time: <6ns
Sine Wave	4	8MHz - 40MHz 40MHz – 160MHz	F: Fundamental O: Overtone	Load: Nominal value50Ω Power output: >2dBm Harmonic suppression: >-25dB Clutter suppression: >-75dB

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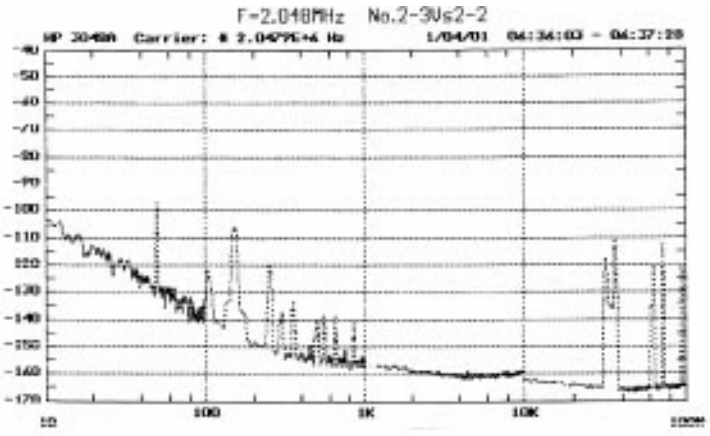
PRODUCT CODING SYSTEM – TABLE 3

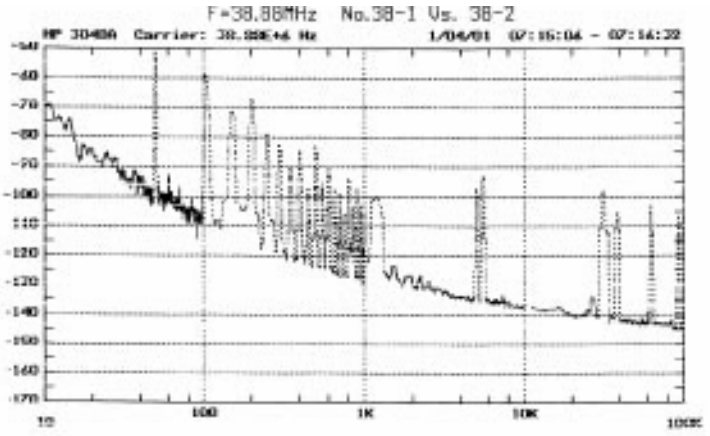
Type	Package Style	ABR	Output Type & Load Characteristics	Supply Voltage		Frequency: MHz
VC	14P; F	See Table 1	See Table 2	5V: 5; 3V:3	-	XXXMXXX

Example: VCFK25-27M000

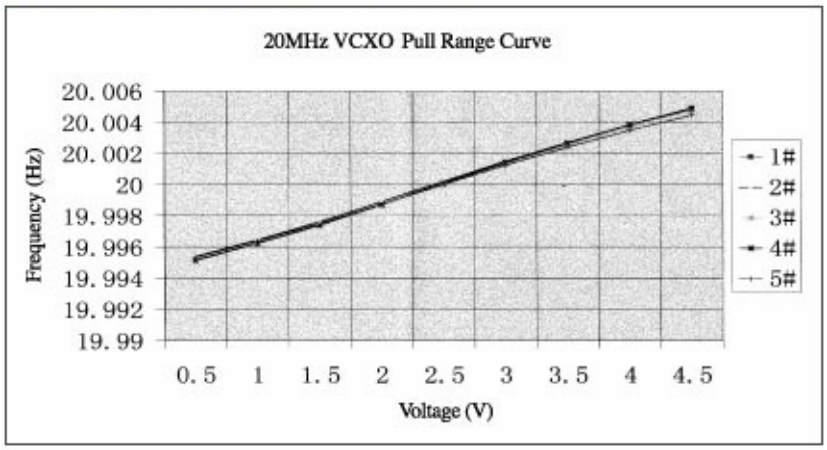
■ 2.048MHz VCXO Phase Noise Curve



■ 38.88MHz VCXO Phase Noise Curve



■ 20MHz VCXO Pull Range Curve



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