

### VOLTAGE CONTROLLED & TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR UNIT WITH CLIPPED SINE WAVE OUTPUT IN METAL DIP-14 PACKAGE.

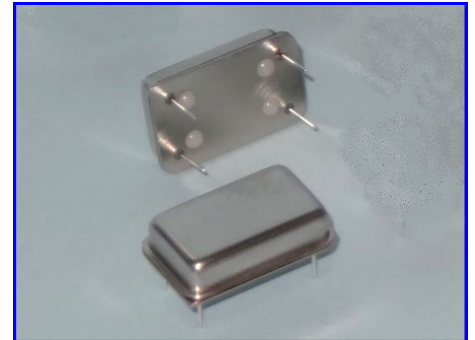
## VCT3

#### PRODUCT FEATURES

- VCTCXO IN DIP-14 PACKAGE SIZE 20 x 13 x 7.5MM WITH 4 PINS.
- FREQUENCY RANGE 10 TO 55MHZ.
- LOW JITTER AND PHASE NOISE.

#### APPLICATIONS

- ETHERNET, ADSL
- WLAN / WiMAX
- AUDIO & VIDEO EQUIPMENT
- LARGE SCALE EQUIPMENT



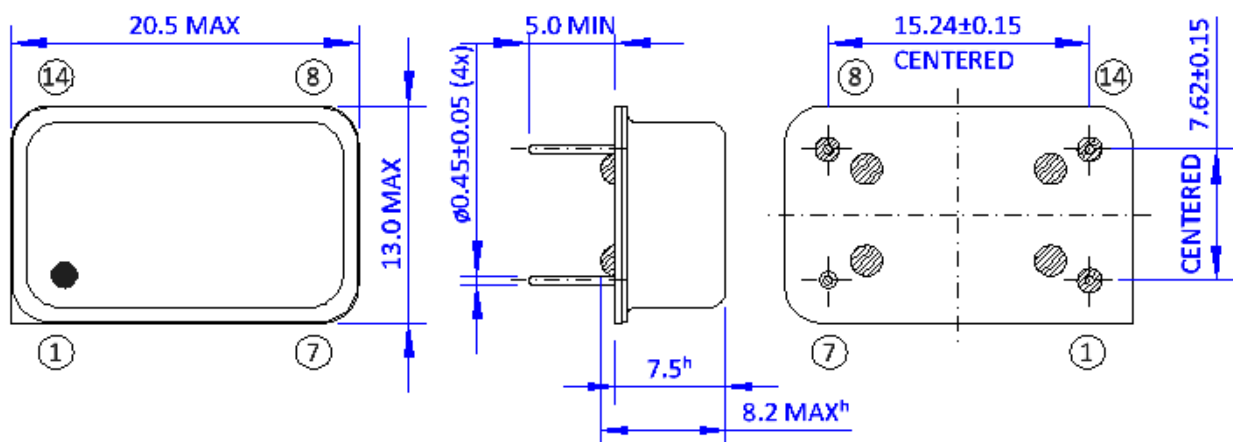
#### PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	PARAMETER VALUES / LIMITS	CONDITIONS / REMARKS
NOMINAL FREQUENCY	$F_N$	<b>10 ~ 55MHZ</b>	—
SUPPLY VOLTAGE RANGE	$V_{DD}$	2.5V / 2.8V / 3.3V / 5.0V	SEE OPTIONS TABLE ON PAGE 2 FOR DETAILS
SUPPLY CURRENT CONSUMPTION	$I_{DD}$	2 ~ 5mA	SEE NOTE 1
FREQUENCY TOLERANCE	$\Delta f/F_N$	$\pm 1.0\text{PPM}$ OR $\pm 2.0\text{PPM}$	@+25°C, OTHERS AVAILABLE
FREQUENCY STABILITY VS TEMP.	$\Delta f/F_N$	$\pm 1.0\text{PPM}$ TO $\pm 5.0\text{PPM}$	SEE NOTE 2, OTHERS AVAILABLE
OPERATING TEMPERATURE RANGE	$T_{OP}$	-10~+60°C OR -20~+70°C OR -40~+85°C	OTHER OPTIONS AVAILABLE
CONTROL VOLTAGE RANGE	$V_C$	0.5V <sub>DC</sub> TO 2.5V <sub>DC</sub>	—
FREQUENCY PULLING RANGE	$\Delta f/V_C$	$\pm 5.0\text{PPM}$ MIN	DEPENDING ON SUPPLY VOLTAGE & FREQUENCY
AGING FIRST YEAR	$(\Delta f/F_N)y1$	$\pm 1\text{PPM}$	@+25°C
OUTPUT WAVEFORM / LOAD	— / $R_L$	CLIPPED SINE WAVE / 10kΩ//10PF	—
OUTPUT VOLTAGE LEVEL	$V_O$	$\geq 0.8V_{PP}$ / $\leq 2.0V_{PP}$	VOLTAGE PEAK TO PEAK
PHASE NOISE	$\ell(\Delta f)$	-80 / -115 / -135 / -138 / -142dBc	TYP. 10MHZ AT 10 / 100 / 1k / 10k / 100kHz
TRISTATE FUNCTION (OPTIONAL) ENABLE/DISABLE FUNCTION PIN 1	E/D	PIN1 = HIGH OR OPEN -> OUTPUT PIN3 ACTIVE PIN1 = LOW -> OUTPUT PIN3 HIGH IMPEDANCE	• OUTPUT HIGH IMPEDANCE = TRI-STATE • PIN1 CAN BE LEFT OPEN = FLOATING

NOTE 1: CURRENT CONSUMPTION VARIES BY SUPPLY VOLTAGE, SEE OPTIONS TABLE ON PAGE 2 FOR MORE DETAILS.

NOTE 2: FREQUENCY STABILITY IS THE DEVIATIONS OVER OPERATING TEMPERATURE RANGE IN REFERENCE TO THE READING AT +25°C.

#### MECHANICAL DIMENSIONS



PIN	FUNCTION
1	CONTROL VOLTAGE [Vc]
7	GROUND [GND]
8	RF OUTPUT [CLK]
14	SUPPLY VOLTAGE [Vdd]

#### Notes:

The metal case is connected to pin 7 and therefore grounded (GND).

<sup>h</sup> The package height may vary depending on design, check specification sheet for information.

Metal can DIP-14 VCTCXO package  
20x13mm with 4 pins

DIP14VT-P4 2017-09 c

No scale Unit: mm

### VOLTAGE CONTROLLED & TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR UNIT WITH CLIPPED SINE WAVE OUTPUT IN METAL DIP-14 PACKAGE.

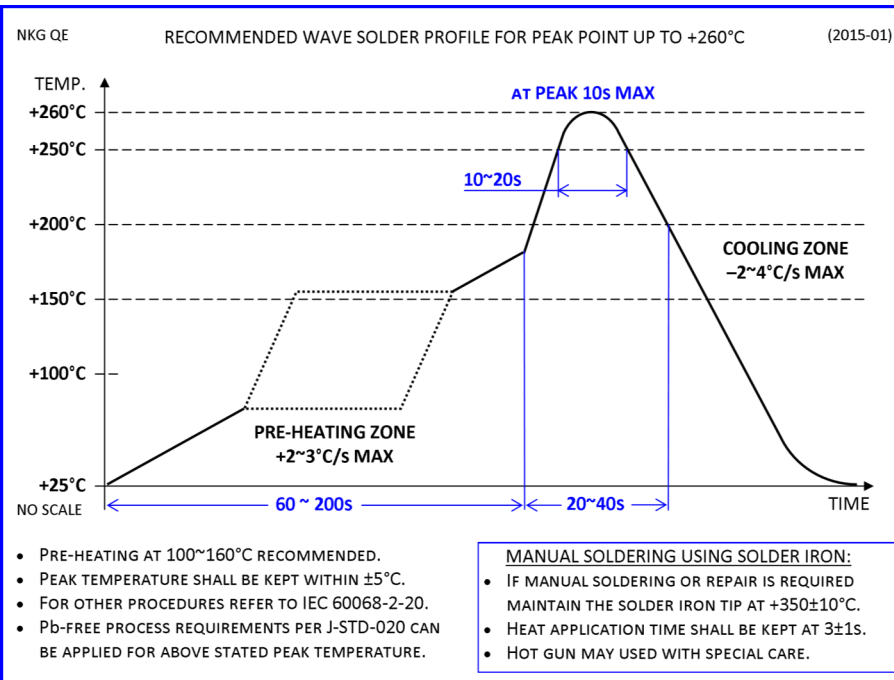
# VCT3

#### ENVIRONMENTAL COMPLIANCE INFORMATION

- ROHS 6/6 COMPLIANT (DIRECTIVE 2011/65/EC).
- COMPLIANT TO ROHS 2 (DIRECTIVE 2015/863) (ALSO CALLED ROHS 10).
- PRODUCT DOES NOT CONTAIN PVC (POLYVINYL CHLORIDE).
- PRODUCT DOES NOT CONTAIN PFOS/PFOA NOR BEING SAME USED TO MANUFACTURE THE COMPONENTS OF THIS PRODUCT.
- MOISTURE SENSITIVITY LEVEL (MSL) 1 PER J-STD-020C.



#### SOLDERING RECOMMENDATIONS



#### PACKAGING INFORMATION

- PACKAGING IN ANTISTATIC TUBES.
- QTY PER TUBE: 25PCS
- ALTERNATE PACKAGING IN PLASTIC TRAYS AND FOAM TRAY IS AVAILABLE.

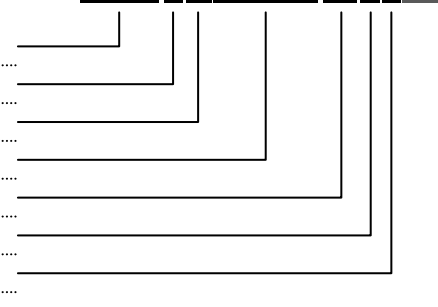
#### AVAILABLE OPTIONS

PARAMETER	SYMBOL	VCT32		VCT35		VCT38		VCT39	
SUPPLY VOLTAGE	V <sub>DD</sub>	5.0V ±5%		3.3V ±5%		2.8V ±5%		2.5V ±5%	
FREQUENCY RANGE [MHZ]	F <sub>N</sub>	10 ~ 25	25 ~ 55	10 ~ 25	25 ~ 55	10 ~ 25	25 ~ 55	10 ~ 25	25 ~ 55
SUPPLY CURRENT (MAX)	I <sub>DD</sub>	<4mA	<5mA	<3mA	<3.5mA	<2mA	<3mA	<2mA	<3mA

#### PART NUMBER SYNTAX

- PART NUMBER FAMILY (REPRESENTS MODEL WITH HCMOS OUTPUT AND PACKAGE SIZE)
- SUPPLY VOLTAGE NOMINATOR (I.E. 2=5V, 5= 3.3V, 8= 2.8V, 9= 2.5V, SEE OPTIONS TABLE)
- FREQUENCY STABILITY CODE (I.E. N= ±5PPM, Q= ±2.5PPM, U= ±1.5PPM, W= ±0.5PPM)
- NOMINAL FREQUENCY (IN MHZ WITH AT LEAST THREE DIGITS AFTER DECIMAL POINT)
- OPERATING TEMPERATURE RANGE CODE (I.E. C= -10~60°, E= -20~70°C, W= -40~85°C)
- OUTPUT MODE INDICATOR (C= CLIPPED SINE WAVE, T= TRUE SINE WAVE)
- MINIMUM FREQUENCY PULL (VALUE IN PPM I.E. 5= ±5PPM, 8= ±8PPM, 10= ±10PPM)
- PART NUMBER EXTENSION (ONLY FOR NON-STANDARD OR CUSTOMIZED PARTS)

VCT3 5 Q25.000 WC5-EXT



IF THERE IS A LARGE NUMBER OF CODES IN USE THE TABLE ABOVE MAY ONLY SHOW A FEW EXAMPLES.

FOR MORE INFORMATION PLEASE CONTACT US.

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