

TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR UNIT WITH CLIPPED SINE WAVE OUTPUT IN METAL CAN DIP-8 PACKAGE.

TCO4

PRODUCT FEATURES

- TCXO IN DIP-8 PACKAGE SIZE 13 X 13 X 6MM 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	10 ~ 55MHZ	—
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
AGING FIRST YEAR	$(\Delta f/F_N)\gamma 1$	$\pm 1\text{PPM}$	@+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

Top view dimensions: 13.0 MAX (width), 13.0 MAX (height). Pin locations: 1, 4, 5, 8.

Side view dimensions: 5.0 MIN (height), $\phi 0.45 \pm 0.05$ (4x) (pin diameter), 5.5^h (height), 6.3 MAX^h (height).

Bottom view dimensions: 7.62 ± 0.15 CENTERED (width), 7.62 ± 0.15 CENTERED (height).

PIN	FUNCTION
1	N.C.*
7	GROUND [GND]
8	RF OUTPUT [CLK]
14	SUPPLY VOLTAGE [Vdd]

* Option for ENABLE / DISABLE function can be available for certain models.

Notes:
 The metal case is connected to pin 4 and therefore grounded (GND).
^h The package height may vary depending on design, check specification sheet for information.

Metal can DIP-8 TCXO package
 13x13mm with 4 pins
DIP8TC-P4 2017-09 C
 No scale Unit: mm

TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR UNIT WITH CLIPPED SINE WAVE OUTPUT IN METAL CAN DIP-8 PACKAGE.

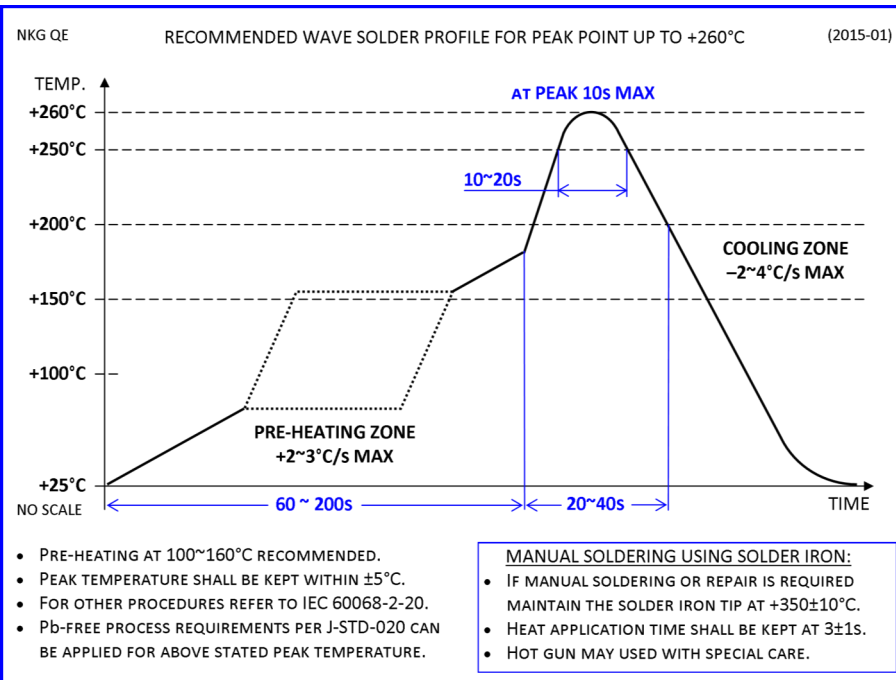
TCO4

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: 40PCS
- ALTERNATE PACKAGING IN PLASTIC TRAYS AND FOAM TRAY IS AVAILABLE.

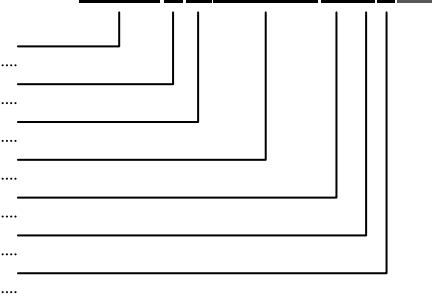
AVAILABLE OPTIONS

PARAMETER	SYMBOL	TCO42		TCO45		TCO48		TCO49	
SUPPLY VOLTAGE	V _{DD}	5.0V ±5%		3.3V ±5%		2.8V ±5%		2.5V ±5%	
FREQUENCY RANGE [MHZ]	F _N	10 ~ 25	25 ~ 55	10 ~ 25	25 ~ 55	10 ~ 25	25 ~ 55	10 ~ 25	25 ~ 55
SUPPLY CURRENT (MAX)	I _{DD}	<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)
- OUTPUT LOAD DESIGNATOR (I.E. S= STANDARD 10KΩ//10PF)
- PART NUMBER EXTENSION (ONLY FOR NON-STANDARD OR CUSTOMIZED PARTS)

TCO45 Q25.000 WCS-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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