

VOLTAGE CONTROLLED CRYSTAL OSCILLATOR UNIT WITH HCMOS OUTPUT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 5.0 X 3.2MM WITH 4 PADS.

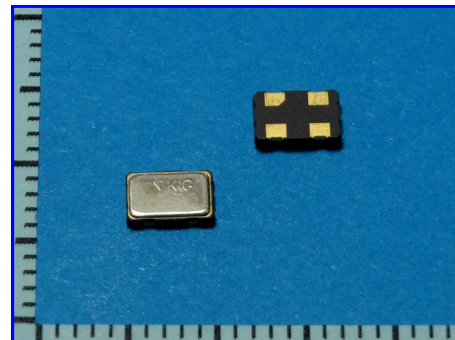
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PRODUCT FEATURES

- VCXO IN SMD PACKAGE SIZE 5.0 X 3.2 X 1.2MM WITH 4 PADS.
- FREQUENCY RANGE 1 TO 50MHZ.
- FREQUENCY PULLING RANGES ± 80 OR ± 100 PPM MINIMUM.
- LOW JITTER AND PHASE NOISE DESIGNS.

APPLICATIONS

- SONET / ATM
- SET-TOP BOXES
- WIRELESS
- AUDIO & VIDEO EQUIPMENT



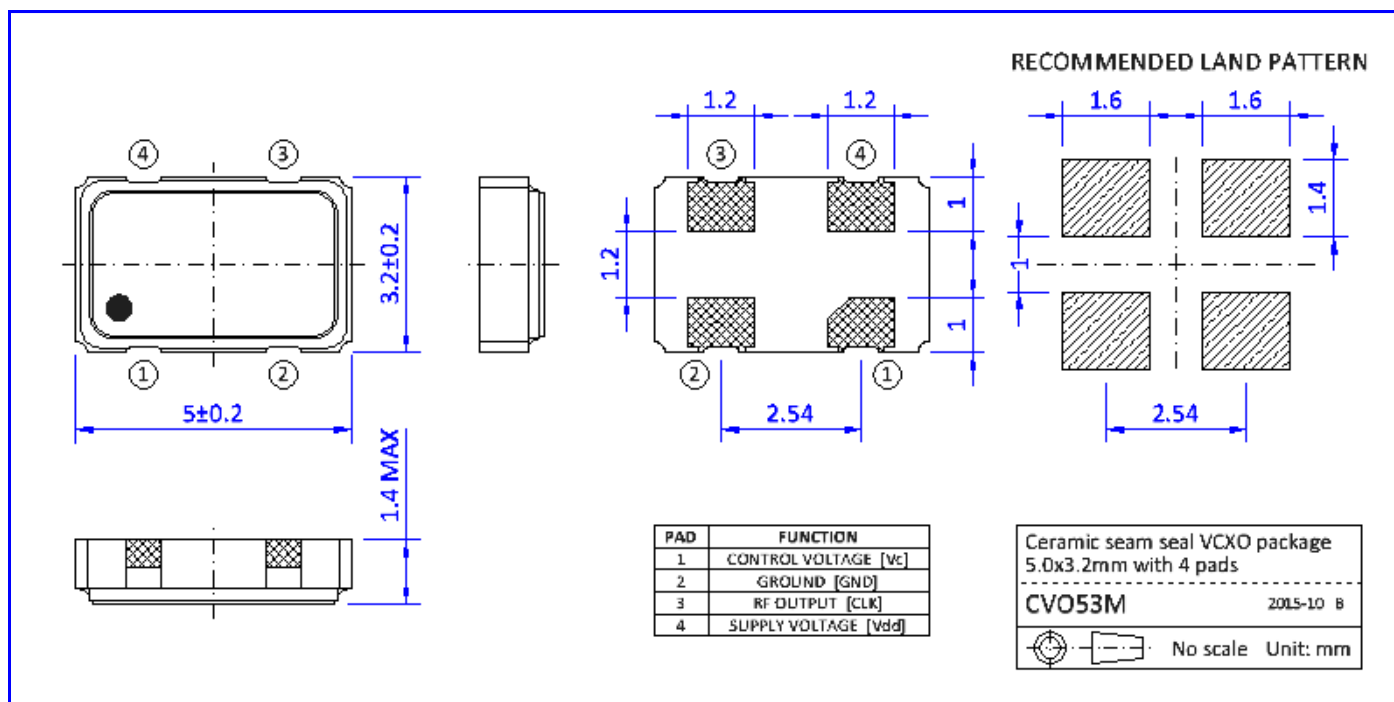
PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	PARAMETER VALUES / LIMITS	CONDITIONS / REMARKS
NOMINAL FREQUENCY	F_N	1 ~ 50MHZ	FUNDAMENTAL DESIGN
SUPPLY VOLTAGE RANGE	V_{DD}	1.8V _{DC} / 2.5V _{DC} / 3.3V _{DC} / 5.0V _{DC}	—
SUPPLY CURRENT CONSUMPTION	I_{DD}	<20mA	SEE NOTE 1
OVERALL FREQUENCY STABILITY	$\Delta f/F_N$	± 25 PPM, ± 50 PPM, ± 100 PPM	SEE NOTE 2, OTHERS AVAILABLE
AGING FIRST YEAR	$(\Delta f/F_N)_{y1}$	± 3 PPM	@+25°C
CONTROL VOLTAGE RANGE	V_C	0~1.8V / 0.2~2.3V / 0.3~3.0V / 0.5~4.5V	@V _{DD} =1.8V / @V _{DD} =2.5V / @V _{DD} =3.3V / @V _{DD} =5V
FREQUENCY PULLING RANGE	$\Delta f/V_C$	± 80 PPM / ± 100 PPM	MIN FOR FUNDAMENTAL / PLL DESIGN
OPERATING TEMPERATURE RANGE	T_{OP}	-10°C ~ +70°C / -40°C ~ +85°C	TYPICALLY USED, OTHERS REQUEST
OUTPUT WAVEFORM / LOAD	— / C_L	HCMOS & LVCMOS / 15PF	@ HIGHER SUPPLY VOLTAGES HIGHER LOADS
OUTPUT VOLTAGE LEVELS	V_{OH} / V_{OL}	$\geq 90\%V_{DD}$ / $\leq 10\%V_{DD}$	—
RISE AND FALL TIMES	t_R AND t_F	6ns MAX	@20%~80% OF WAVEFORM
OUTPUT SYMMETRY (DUTY CYCLE)	DC	50 \pm 10% OR 50 \pm 5%	@50%V _{DD}
PHASE JITTER (12KHZ \leq F \leq 20MHZ)	J_{RMS}	1.0ps MAX	FOR 27MHZ
PHASE NOISE (TYPICAL)	$\ell(\Delta f)$	-75 / -104 / -132 / -146 / -148dBc	27MHZ @10Hz,100Hz,1kHz,10kHz,100kHz

NOTE 1: CURRENT CONSUMPTION IS TYPICAL FOR 3.3V, AT LOWER SUPPLY VOLTAGES LESS CONSUMPTION APPLIES..

NOTE 2: OVERALL FREQUENCY STABILITY INCLUDES TOLERANCE @+25°C, DEVIATIONS OVER OPERATING TEMPERATURE RANGE, DEVIATIONS DUE TO OUTPUT LOAD VARIATIONS AND SUPPLY VOLTAGE FLUCTUATIONS.

MECHANICAL DIMENSIONS



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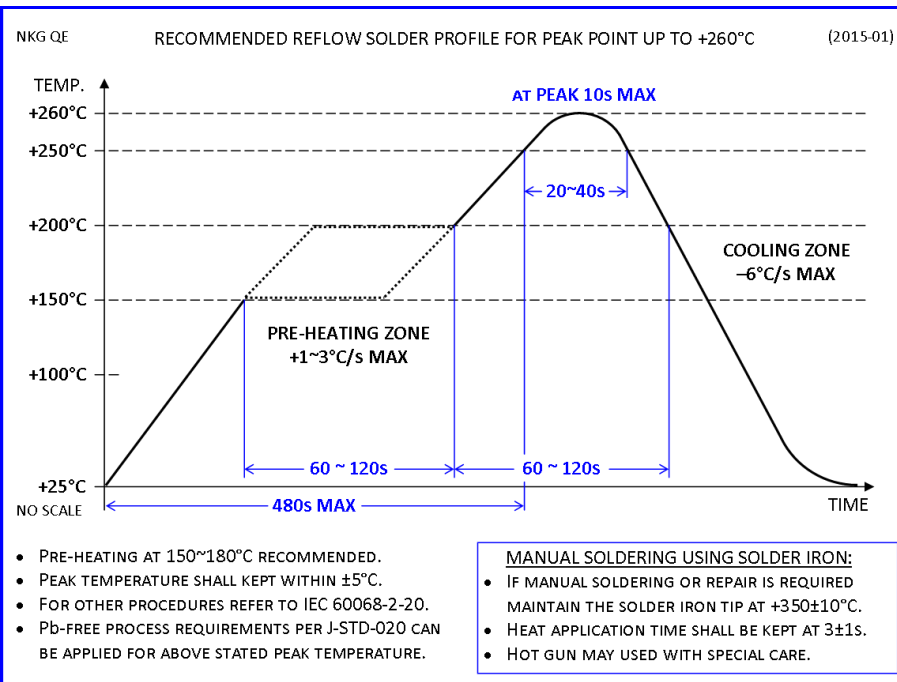
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ENVIRONMENTAL COMPLIANCE INFORMATION

- ROHS 6/6 COMPLIANT (DIRECTIVE 2011/65/EC) AND LEAD-FREE.
- COMPLIANT TO ROHS 2 (DIRECTIVE 2015/863) (ALSO CALLED ROHS 10).
- HALOGEN-FREE PER DEFINITION OF IEC 61249-2-21 2033.
- NONE-USE OF SVHCs PER REACH IS CURRENTLY GIVEN, CONTINUOUSLY MONITORED AND UPDATED AS THE COMMISSION ISSUES NEW RELEASES.
- PRODUCT DOES NOT CONTAIN ANY PHTHALATES (PHS).
- PRODUCT DOES NOT CONTAIN PVC (POLYVINYL CHLORIDE).
- PRODUCT DOES NOT CONTAIN PFOS/PFOA NOR BEING SAME USED TO MANUFACTURE THE COMPONENTS OF THIS PRODUCT.

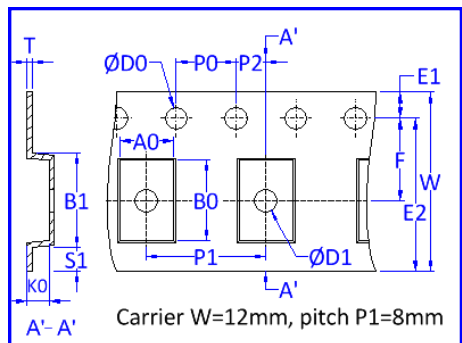


SOLDERING RECOMMENDATIONS



PACKAGING INFORMATION

- PACKAGING IN TAPE & REEL IN COMPLIANCE TO EIA-481.
- QTY PER REEL: 1,000PCS
- REEL DIA A=180MM.
- EMBOSSED CARRIER TAPE WIDTH W = 12MM.
- COMPONENT PITCH P1 = 8MM.

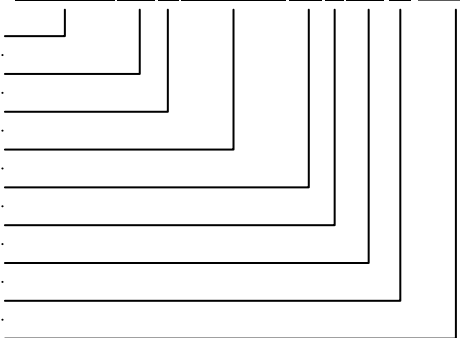


PART NUMBER SYNTAX

- PART NUMBER FAMILY (REPRESENTS MODEL WITH HCMOS OUTPUT AND PACKAGE SIZE)
- SUPPLY VOLTAGE DESIGNATOR (I.E. 50= 5.0V, 33= 3.3V, 25= 2.5V, 18= 1.8V)
- FREQUENCY STABILITY CODE (I.E. A= ±25PPM, B= ±50PPM, C= ±100PPM, D= ±30PPM)
- NOMINAL FREQUENCY (IN MHZ WITH AT LEAST THREE DIGITS AFTER DECIMAL POINT)
- OPERATING TEMPERATURE RANGE CODE (I.E. M= -10~70°C, W= -40~85°C)
- OUTPUT SYMMETRY INDICATOR (N= 50±10%, T= 50±5%)
- FREQUENCY PULLING RANGE (VALUE IN PPM I.E. 50= ±50PPM, 100= ±100PPM)
- FREQUENCY PULLING MODE (BLANK FOR STANDARD, A= ABSOLUTE PULLING RANGE APR)
- PART NUMBER EXTENSION (ONLY FOR NON-STANDARD OR CUSTOMIZED PARTS)

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

SVCH533 B50.000 MT50 A -EXT



FOR MORE INFORMATION PLEASE CONTACT US.

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