

### VOLTAGE CONTROLLED CRYSTAL OSCILLATOR UNIT WITH LVDS OUTPUT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 5.0 x 3.2MM WITH 6 PADS.

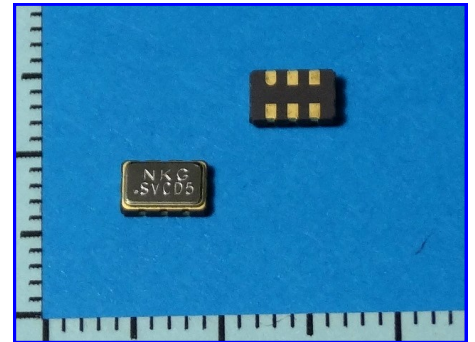
## SVCD5

#### PRODUCT FEATURES

- VCXO IN SMD PACKAGE SIZE 5.0 x 3.2 x 1.4MM WITH 6 PADS.
- WIDE FREQUENCY RANGE 10 TO 180MHZ.
- FREQUENCY PULLING RANGES FROM ±50 TO ±200PPM.
- LOW JITTER AND PHASE NOISE DESIGNS.

#### APPLICATIONS

- HIGH SPEED NETWORKING
- WIRELESS REPEATERS
- FIBER CHANNEL, TRANSPONDERS
- AUDIO & VIDEO EQUIPMENT



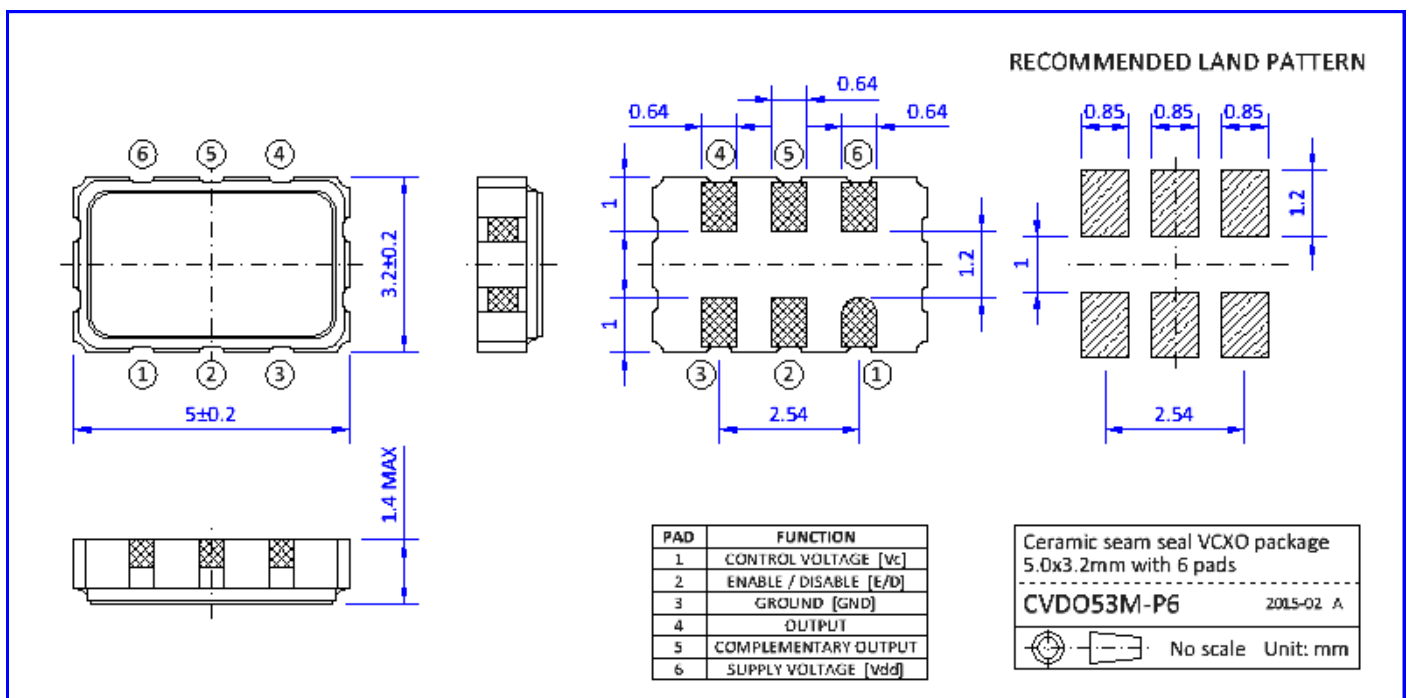
#### PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	PARAMETER VALUES / LIMITS	CONDITIONS / REMARKS
NOMINAL FREQUENCY	$F_N$	<b>10 ~ 60MHz / 60 ~ 180MHz</b>	FUNDAMENTAL OR 3RD OVERTONE DESIGN
SUPPLY VOLTAGE RANGE	$V_{DD}$	2.5V <sub>DC</sub> / 3.3V <sub>DC</sub>	—
SUPPLY CURRENT CONSUMPTION	$I_{DD}$	<20mA	SEE NOTE 1
OVERALL FREQUENCY STABILITY	$\Delta f/F_N$	±25PPM, ±50PPM, ±100PPM	SEE NOTE 2, OTHERS AVAILABLE
AGING FIRST YEAR	$(\Delta f/F_N)y1$	±3PPM	@+25°C
CONTROL VOLTAGE RANGE	$V_C$	0.2 ~ 2.3V / 0.3 ~ 3.0V	@V <sub>DD</sub> =2.5V / @V <sub>DD</sub> =3.3V
FREQUENCY PULLING RANGE	$\Delta f/V_C$	±50PPM UP TO ±200PPM	DEPENDING ON FREQUENCY
OPERATING TEMPERATURE RANGE	$T_{OP}$	-10°C ~ +70°C / -40°C ~ +85°C	TYPICALLY USED, OTHERS REQUEST
OUTPUT WAVEFORM / LOAD	— / $Z_L$	LVDS / 50Ω INTO V <sub>CC</sub> -2V	100Ω BETWEEN THE TWO OUTPUTS
OUTPUT VOLTAGE LEVELS	$V_{OH}/V_{OL}$	1.4V TYP / 1.0 TYP	PER TIA/EIA-644
OUTPUT VOLTAGE SWING	$\Delta V_{OUT}$	250mV / 350mV	TYP @V <sub>DD</sub> 2.5V / @V <sub>DD</sub> =3.3V
RISE AND FALL TIMES	$t_R$ AND $t_F$	0.5ns MAX	@20%~80% OF WAVEFORM
OUTPUT SYMMETRY (DUTY CYCLE)	DC	45/55%	@50%V <sub>DD</sub>
PHASE JITTER (12kHz≤F <sub>J</sub> ≤20MHz)	$J_{RMS}$	0.6ps TYP / 1.0ps MAX	FOR 156.25MHz
PHASE NOISE (TYPICAL)	$\ell(\Delta f)$	-55 / -85 / -109 / -116 / -118dBc	156.25MHz @ 10Hz, 100Hz, 1kHz, 10kHz, 100kHz
STANDBY FUNCTION (E/D ON PIN 2)	E/D	PIN2=HIGH OR OPEN -> OUTPUTS ARE ACTIVE	PIN2=LOW -> OUTPUTS ARE HIGH IMPED.

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



### VOLTAGE CONTROLLED CRYSTAL OSCILLATOR UNIT WITH LVDS OUTPUT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 5.0 X 3.2MM WITH 6 PADS.

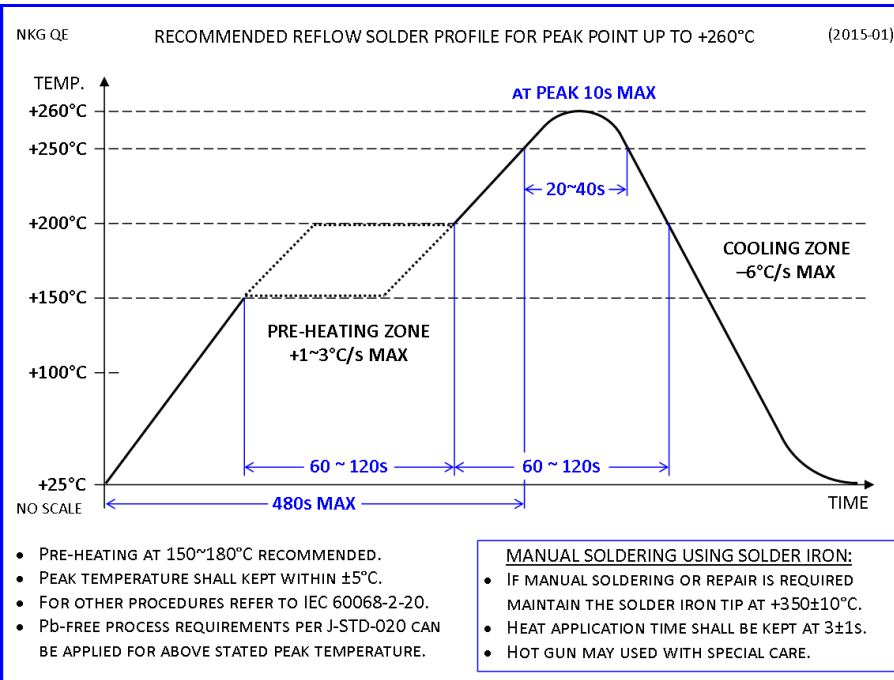
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#### ENVIRONMENTAL COMPLIANCE INFORMATION

- ROHS 6/6 COMPLIANT (DIRECTIVE 2011/65/EC) AND LEAD-FREE.
- COMPLIANT TO ROHS 2 (DIRECTIVE 2015/863) (ALSO CALLED ROHS10).
- 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.

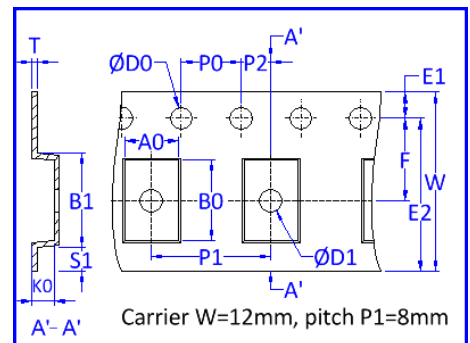


#### SOLDERING RECOMMENDATIONS



#### 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 LVDS 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%)

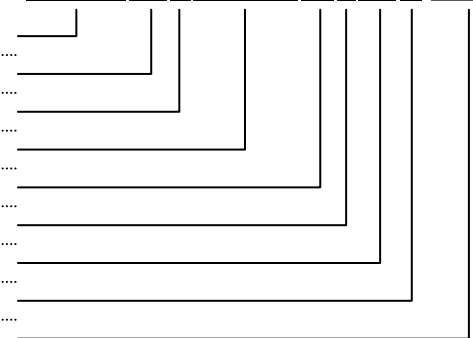
FREQUENCY PULLING RANGE (VALUE IN PPM I.E. 50= ±50PPM, 100= ±100PPM)

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.

#### SVCD533 B50.000 MT50 A -EXT



FOR MORE INFORMATION PLEASE CONTACT US.

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