

CRYSTAL OSCILLATOR UNIT WITH HCMOS OUTPUT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 5.0 x 3.2MM.

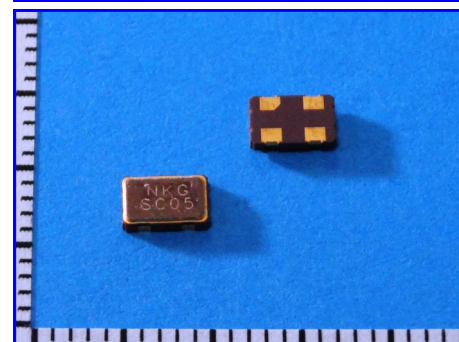
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PRODUCT FEATURES

- SMD PACKAGE SIZE 5.0 x 3.2 x 1.2MM WITH 4 PADS.
- HIGHLY RELIABLE SEAM SEAL PACKAGE WITH LOW AGING.
- ULTRA LOW JITTER AND PHASE NOISE VERSIONS AVAILABLE.
- AUTOMOTIVE GRADE COMPLIANT TO AEC-Q200 IS AVAILABLE.

APPLICATIONS

- NOTEBOOK, PDA
- MICROPROCESSOR
- LAN, WLAN, MODEMS
- USB DEVICES



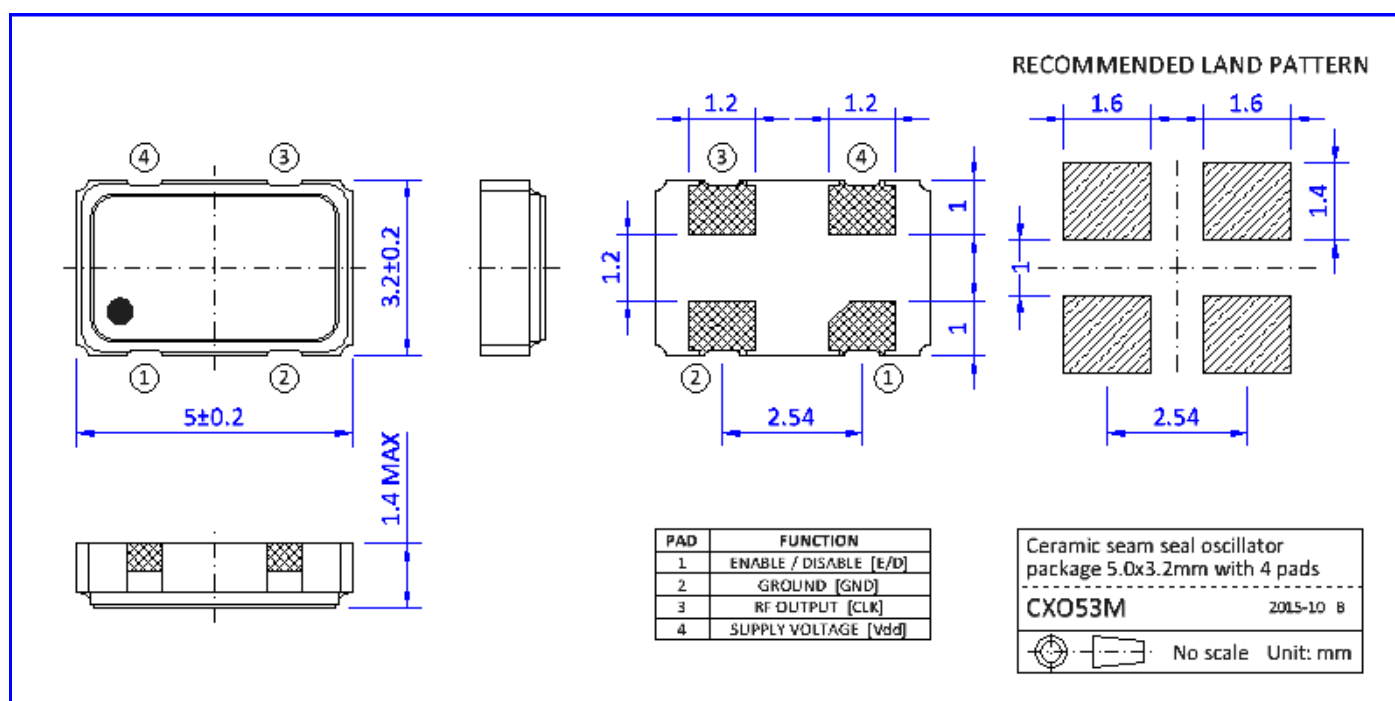
PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	PARAMETER VALUES / LIMITS	CONDITIONS / REMARKS
NOMINAL FREQUENCY	F_N	1.0 ~ 160MHz	FUNDAMENTAL OR 3RD OVERTONE DESIGN
SUPPLY VOLTAGE RANGE	V_{DD}	1.8V / 2.5V / 3.3V / 5.0V	MORE AVAILABLE, PLEASE CONTACT US
SUPPLY CURRENT CONSUMPTION	I_{DD}	3mA ~ 40mA	SEE NOTE 1
OVERALL FREQUENCY STABILITY	$\Delta f/F_N$	± 20 PPM, ± 25 PPM, ± 50 PPM	SEE NOTE 2, OTHERS AVAILABLE
OPERATING TEMPERATURE RANGE	T_{OP}	$-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$ UP TO $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$	OTHER OPTIONS AVAILABLE
AGING FIRST YEAR	$(\Delta f/F_N)y1$	± 3 PPM	@+25°C
OUTPUT WAVEFORM / LOAD	— / C_L	HCMOS / 15pF OR 30pF	MOST COMMON, OTHERS ON REQUEST
OUTPUT VOLTAGE LEVELS	V_{OH} / V_{OL}	$\geq 90\%V_{DD}$ / $\leq 10\%V_{DD}$	—
RISE AND FALL TIMES	t_R AND t_F	$\leq 8\text{ns}$ below 16MHz $\leq 5\text{ns}$ 16~40MHz $\leq 4\text{ns}$ 40~100MHz $\leq 2\text{ns}$ above 100MHz	@10%~90%~10% V_{DD} , $V_{DD}=3.3\text{V}$
OUTPUT SYMMETRY (DUTY CYCLE)	DC	40/60% OR 45/55%	@50% V_{DD}
STANDBY FUNCTION (ENABLE/DISABLE ON 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
STANDBY CURRENT CONSUMPTION	I_{STB}	10 μA	TYPICAL

NOTE 1: CURRENT CONSUMPTION IS DEPENDENT ON FREQUENCY AND FOR 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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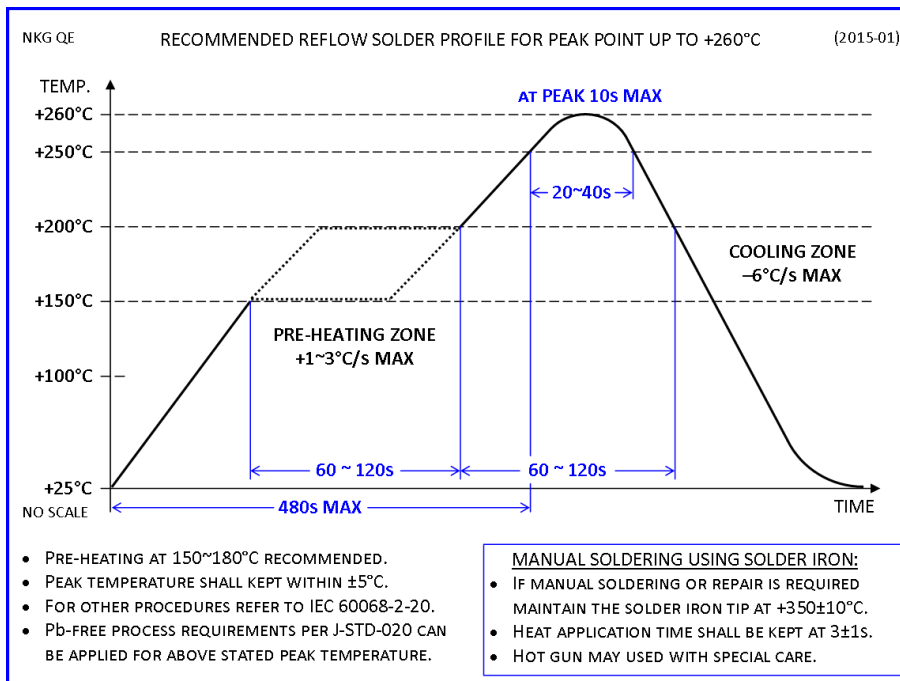
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ENVIRONMENTAL COMPLIANCE INFORMATION

- ROHS 6/6 COMPLIANT (DIRECTIVE 2011/65/EC) AND LEAD-FREE.
- COMPLIANT TO ROHS 2/3 (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.
- MOISTURE SENSITIVITY LEVEL (MSL) 1 PER J-STD-020C.

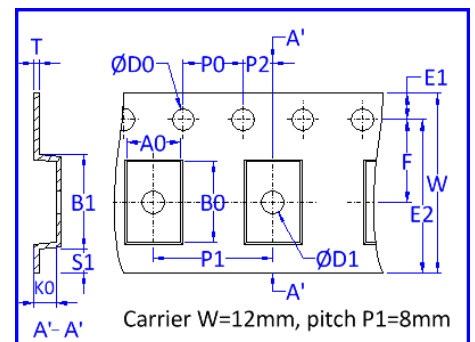


SOLDERING RECOMMENDATIONS



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 PRODUCT MODEL W/ CMOS OUTPUT AND PACKAGE SIZE)

SUPPLY VOLTAGE NOMINATOR (I.E. 3= 5.0V, 6= 3.3V, 7= 1.8V, 8= 2.8V, 9= 2.5V, W= RANGE)

FREQUENCY STABILITY CODE (I.E. A= ±25PPM, B= ±50PPM, C= ±100PPM, D= ±30PPM), G= ±20PPM

NOMINAL FREQUENCY (IN MHZ WITH AT LEAST FOUR DIGITS AFTER DECIMAL POINT)

OPERATING TEMPERATURE RANGE CODE (I.E. M= -10~70°C, W= -40~85°C, Y= -40~105°C, Z= -40~125°C)

OUTPUT SYMMETRY INDICATOR (N= 40/60%, T= 45/55%)

OUTPUT LOAD DESIGNATOR (I.E. A= 10PF, S= STANDARD 15PF, C= 20PF, D= 25PF, E= 30PF, G= 50PF)

PART NUMBER EXTENSION (USED ONLY FOR NON-STANDARD OR CUSTOMIZED PARTS)

SCO5 6 B 25.0000 MTS-EXT

FOR MORE INFORMATION PLEASE CONTACT US.

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