

CRYSTAL OSCILLATOR UNIT WITH HCMOS SPREAD SPECTRUM OUTPUT IN CERAMIC SMD PACKAGE, SIZE 5.0 X 3.2MM.

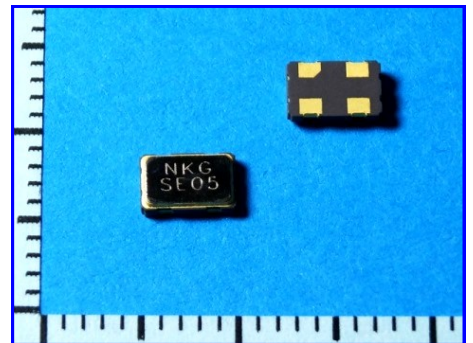
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PRODUCT FEATURES

- SPREAD SPECTRUM OUTPUT IDEAL FOR LOW EMI APPLICATIONS.
- SMD PACKAGE SIZE 5.0 X 3.2 X 1.2MM WITH 4 PADS.
- OUTPUT ENABLE/ DISABLE FUNCTION (OUTPUT TRISTATE).
- HIGHLY RELIABLE SEAM SEAL PACKAGE AND LOW AGING.

APPLICATIONS

- OFFICE EQUIPMENT
- LAN, WAN, ROUTERS
- STORAGE SYSTEMS (CD, DVD, HDD)
- ELECTRICAL MUSIC INSTRUMENTS



PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	PARAMETER VALUES / LIMITS	CONDITIONS / REMARKS
NOMINAL FREQUENCY	F_N	6.0 ~ 160MHz	FUNDAMENTAL OR 3RD OVERTONE DESIGN
SUPPLY VOLTAGE RANGE	V_{DD}	1.8V / 2.5V / 3.3V / 5.5V	MORE AVAILABLE, PLEASE CONTACT US
SUPPLY CURRENT CONSUMPTION	I_{DD}	<10mA / <20mA / <35mA	6~50MHz / 50~100MHz / 100~160MHz
OVERALL FREQUENCY STABILITY	$\Delta f/F_N$	± 25 PPM, ± 50 PPM, ± 100 PPM	SEE NOTE 1, OTHERS AVAILABLE
OPERATING TEMPERATURE RANGE	T_{OP}	-10°C ~ +70°C OR -40°C ~ +85°C	OTHER OPTIONS AVAILABLE
AGING FIRST YEAR	$(\Delta f/F_N)y1$	± 3 PPM	@+25°C
OUTPUT FREQUENCY SPREAD	—	0.5% / 1.0% / 1.5% / 3.0%	AS CENTER OR DOWN SPREAD AVAILABLE
EMI REDUCTION (TYPICAL)	—	10 ~ 18dB	WIDER SPREAD GIVES BETTER REDUCTION
OUTPUT WAVEFORM / LOAD	— / C_L	HCMOS / 15PF	—
OUTPUT VOLTAGE LEVELS	V_{OH}/V_{OL}	$\geq 90\%V_{DD}$ / $\leq 10\%V_{DD}$	—
RISE AND FALL TIMES	t_R AND t_F	<5ns	@10%~90%~10% V_{DD} , $V_{DD}=3.3V$
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 PIN 3 ACTIVE PIN1 = LOW -> OUTPUT PIN 3 HIGH IMPEDANCE	• OUTPUT HIGH IMPEDANCE = TRI-STATE • PIN1 CAN BE LEFT OPEN = FLOATING
STANDBY CURRENT CONSUMPTION	I_{STB}	10 μ A	TYPICAL

NOTE 1: OVERALL FREQUENCY STABILITY INCLUDES TOLERANCE @+25°C, DEVIATIONS OVER OPERATING TEMPERATURE RANGE, DEVIATIONS DUE TO OUTPUT LOAD VARIATIONS AND SUPPLY VOLTAGE FLUCTUATIONS.

MECHANICAL DIMENSIONS

RECOMMENDED LAND PATTERN

PAD	FUNCTION
1	ENABLE / DISABLE [E/D]
2	GROUND [GND]
3	RF OUTPUT [CLK]
4	SUPPLY VOLTAGE [V _{dd}]

Ceramic seam seal oscillator package 5.0x3.2mm with 4 pads

CXO53M 2015-10 B

No scale Unit: mm

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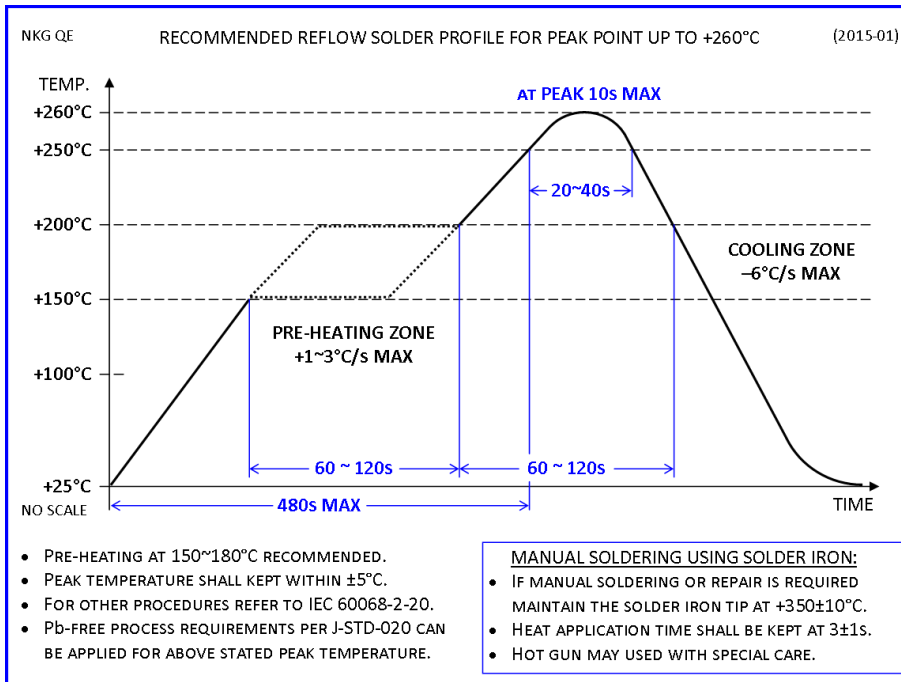
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ENVIRONMENTAL COMPLIANCE INFORMATION

- 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.
- MOISTURE SENSITIVITY LEVEL (MSL) 1 PER J-STD-020C.

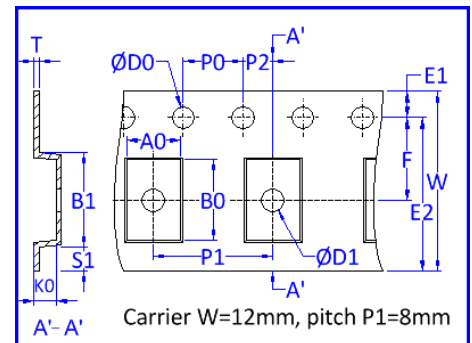


SOLDERING RECOMMENDATIONS



PACKAGING INFORMATION

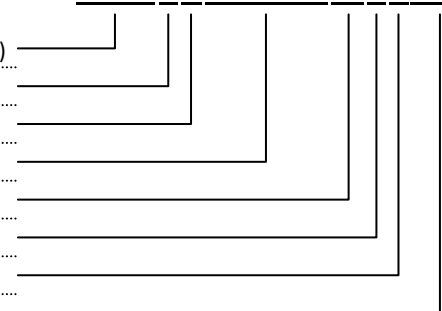
- PACKAGING IN TAPE & REEL IN COMPLIANCE TO EIA-481.
- QTY PER REEL: 1,000PCS
- REEL DIA A=180MM.
- EMBOSSED CARRIER TAPE WIDTH W = 12MM.
- COMPONENT PITCH P1 = 8MM.



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)
- FREQUENCY STABILITY CODE (I.E. A= $\pm 25\text{PPM}$, B= $\pm 50\text{PPM}$, C= $\pm 100\text{PPM}$, D= $\pm 30\text{PPM}$)
- NOMINAL FREQUENCY (IN MHZ WITH AT LEAST FOUR DIGITS AFTER DECIMAL POINT)
- OPERATING TEMPERATURE RANGE CODE (I.E. M= $-10 \sim 70^\circ\text{C}$, W= $-40 \sim 85^\circ\text{C}$)
- OUTPUT SYMMETRY INDICATOR (N= 40/60%, T= 45/55%)
- FREQUENCY SPREAD TYPE (I.E. C= CENTER SPREAD, D= DOWN SPREAD)
- FREQUENCY SPREAD PERCENTAGE (I.E. 0.5= 0.5%, 1.0= 1.0%, 1.5= 1.5%)

SE05 6 B 25.0000 MTC1.0



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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