

### QUARTZ CRYSTAL UNIT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 4.0 X 2.5MM.

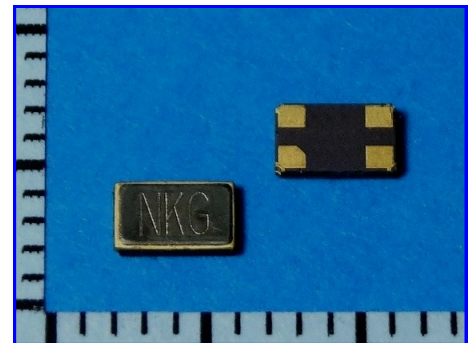
## S4M

#### PRODUCT FEATURES

- MINIATURE PACKAGE SIZE 4.0 X 2.5 X 0.7MM WITH 4 PADS.
- EXCELLENT HEAT AND SHOCK RESISTANCE.
- HIGHLY RELIABLE SEAM SEAL PACKAGE AND LOW AGING.
- AUTOMOTIVE GRADE COMPLIANT TO AEC-Q200 IS AVAILABLE.

#### APPLICATIONS

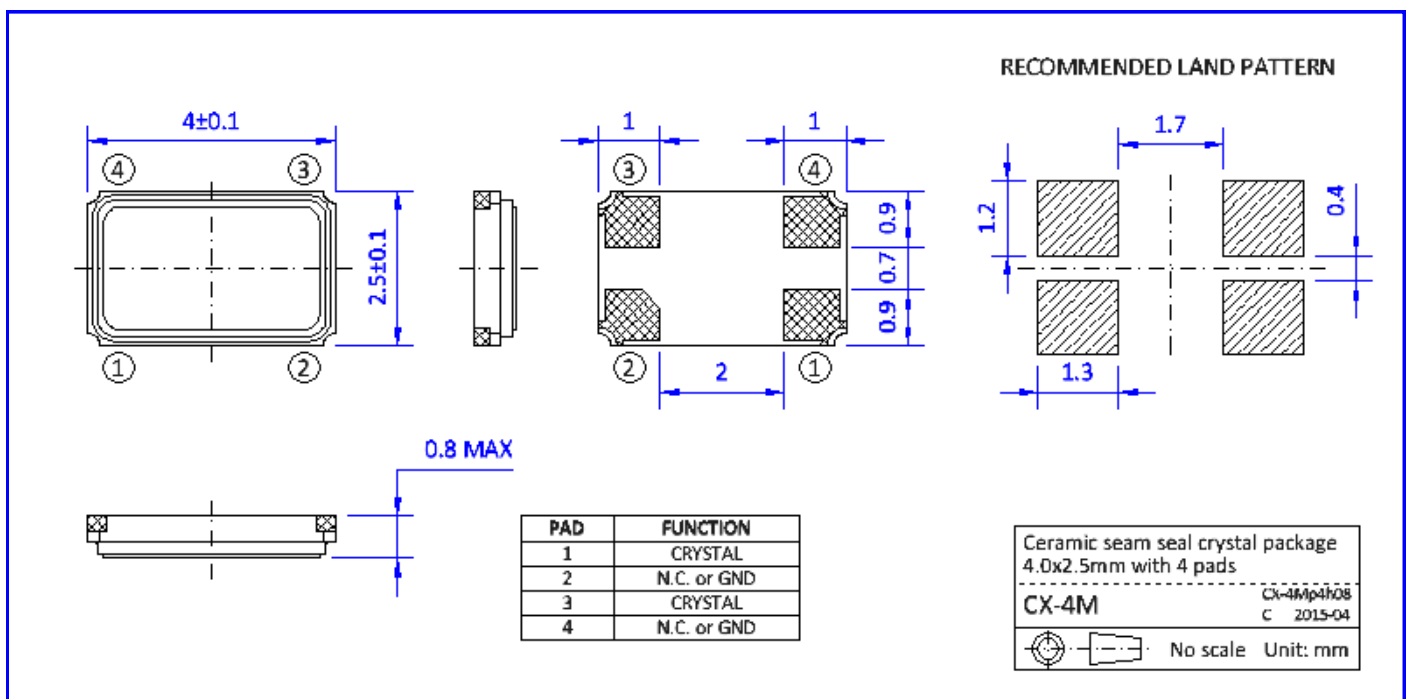
- WIRELESS, BLUETOOTH
- MOBIL COMMUNICATION
- PORTABLE DEVICES
- USB MEMORY DEVICES.



#### PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	SPECIFICATIONS	REMARKS
FREQUENCY RANGE	$F_N$	<b>10.0 ~ 120.0MHZ</b>	FUNDAMENTAL UP TO 60MHZ
OPERATION MODE	—	FUNDAMENTAL / 3RD OVERTONE	OVERTONE ABOVE 50MHZ
FREQUENCY TOLERANCE	$\Delta f/f$	$\pm 10\text{PPM}$ , $\pm 20\text{PPM}$ , $\pm 30\text{PPM}$ , $\pm 50\text{PPM}$	OTHER OPTIONS AVAILABLE
STABILITY OVER OPERATING TEMP.	$T_C$	$\pm 10\text{PPM}$ , $\pm 20\text{PPM}$ , $\pm 30\text{PPM}$ , $\pm 50\text{PPM}$	DEPENDING ON OPERATING TEMPERATURE RANGE
OPERATING TEMPERATURE RANGE	$T_{OP}$	$-20^\circ\text{C} \sim +70^\circ\text{C}$ OR $-40^\circ\text{C} \sim +85^\circ\text{C}$	OTHER OPTIONS AVAILABLE
LOAD CAPACITANCE	CL	8 TO 32PF OR SERIES	PLEASE SPECIFY LOAD CAPACITANCE
EQUIVALENT SERIES RESISTANCE	ESR	120 $\Omega$ MAX	FUND MODE 10 ~ 12MHZ
		100 $\Omega$ MAX	FUND MODE 12 ~ 14MHZ
		80 $\Omega$ MAX	FUND MODE 14 ~ 16MHZ
		60 $\Omega$ MAX	FUND MODE 16 ~ 20MHZ
		50 $\Omega$ MAX	FUND MODE 20 ~ 24MHZ
		40 $\Omega$ MAX	FUND MODE 24 ~ 60MHZ
80 $\Omega$ MAX	3RD OT MODE 54 ~ 120MHZ		
DRIVE LEVEL	DL	100 $\mu\text{W}$ TYP, 300 $\mu\text{W}$ MAX	—
AGING FIRST YEAR	$\Delta f/y_1$	$\pm 3\text{PPM}$	@+25 $^\circ\text{C}$

#### MECHANICAL DIMENSIONS

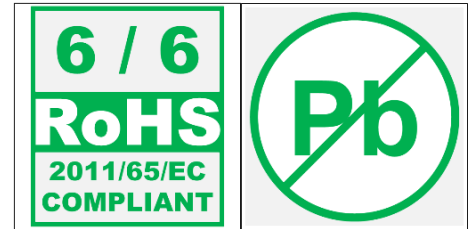


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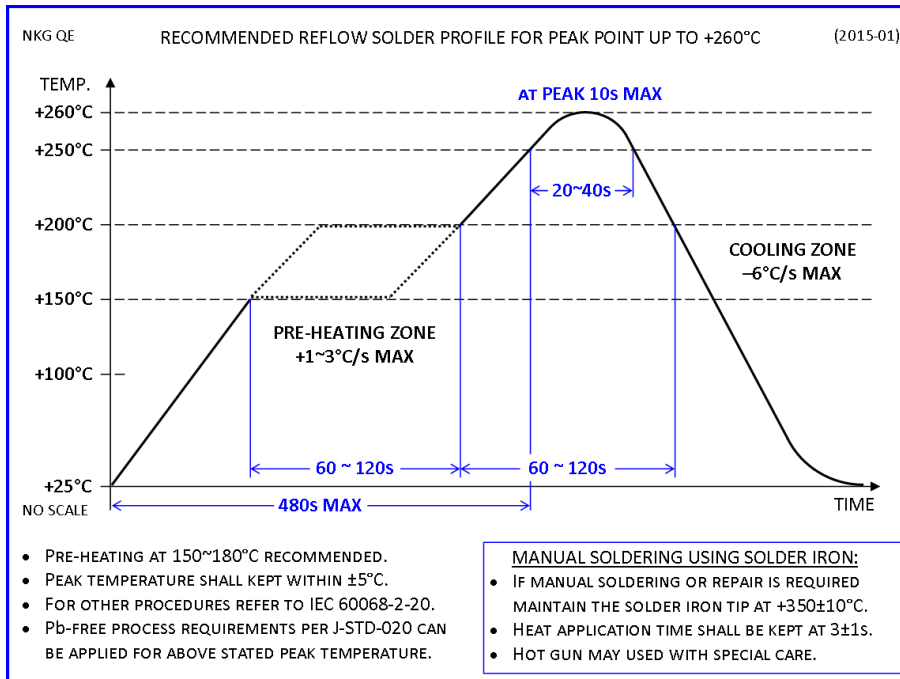
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#### ENVIRONMENTAL COMPLIANCE INFORMATION

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

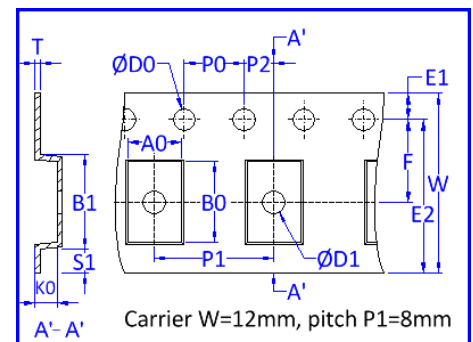


#### SOLDERING RECOMMENDATIONS



#### PACKAGING INFORMATION

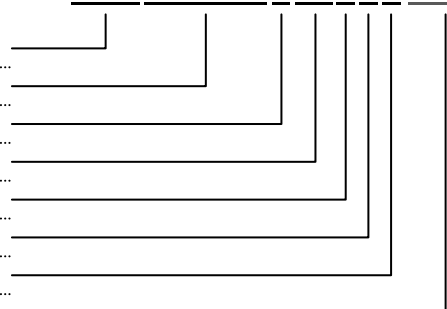
- PACKAGING IN TAPE & REEL IN COMPLIANCE TO EIA-481.
- QTY PER REEL: 1,000PCS
- REEL DIA A=180MM.
- EMBOSSED CARRIER TAPE WIDTH W = 12MM.
- COMPONENT PITCH P1 = 8MM.



#### PART NUMBER SYNTAX

- PART NUMBER FAMILY (REPRESENTS PRODUCT MODEL AND PACKAGE SIZE / TYPE)
- NOMINAL FREQUENCY (IN MHZ WITH AT LEAST FOUR DIGITS AFTER DECIMAL POINT)
- OPERATION MODE CODE (F = FUNDAMENTAL / T = 3RD OVERTONE)
- LOAD CAPACITANCE (ACTUAL VALUE OR "00" FOR SERIES)
- OPERATING TEMPERATURE RANGE CODE (I.E. C= -10~60°C, E= -20~70°C, M= -40~85°C)
- FREQUENCY TOLERANCE DESIGNATOR (I.E. 1=10PPM, 2=20PPM, Y=15PPM, Z=25PPM)
- FREQUENCY STABILITY DESIGNATOR (I.E. 3=30PPM, 5=50PPM, Y=15PPM, Z=25PPM)
- PART NUMBER EXTENSION (ONLY FOR NONE-STANDARD OR CUSTOMIZED PART)

S4M 25.0000 F 18 E 23 -EXT



FOR MORE INFORMATION PLEASE CONTACT US.

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