

### CRYSTAL OSCILLATOR UNIT WITH LVC MOS OUTPUT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 7.0 X 5.0MM WITH 6 PADS.

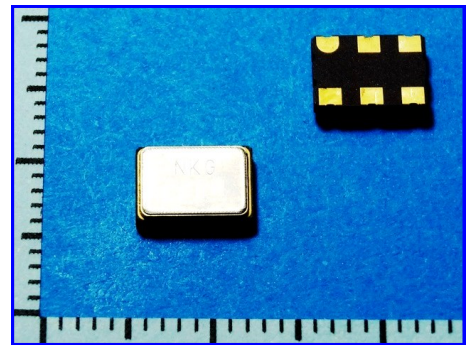
# SCH3

#### PRODUCT FEATURES

- SMD PACKAGE SIZE 7.0 X 5.0 X 1.6MM WITH 6 PADS.
- FREQUENCY RANGE 100 TO 800MHZ
- ULTRA LOW JITTER AND PHASE NOISE.
- HIGHLY RELIABLE SEAM SEAL PACKAGE AND LOW AGING.

#### APPLICATIONS

- HIGH SPEED NETWORKING
- LAN, WLAN
- VGA CARD



#### PRODUCT SPECIFICATIONS

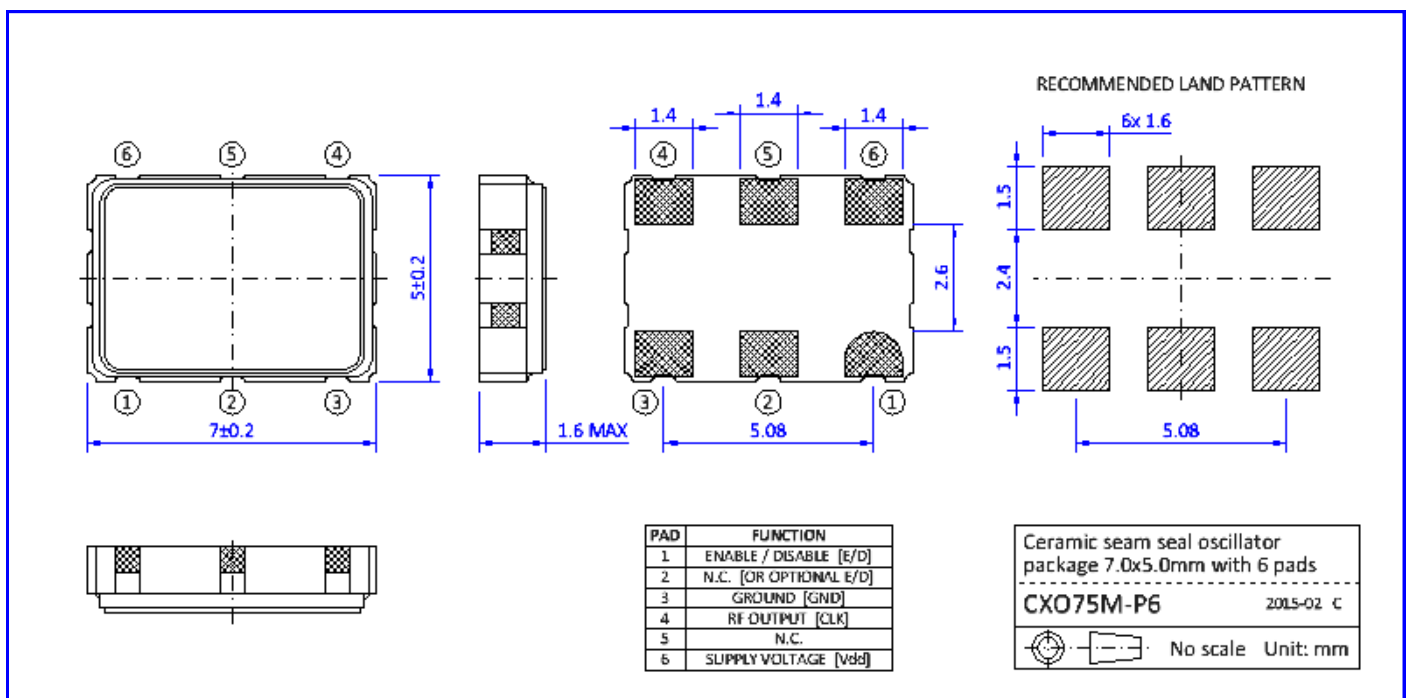
PARAMETER	SYMBOL	PARAMETER VALUES / LIMITS	PARAMETER VALUES / LIMITS
FEATURE / MODEL	—	<b>ULTRA LOW JITTER &amp; PHASE NOISE</b>	<b>LOW JITTER &amp; PHASE NOISE</b>
OSCILLATOR MODE	—	OVERTONE CIRCUIT	MULTIPLIER CIRCUIT
NOMINAL FREQUENCY	$F_N$	<b>100.0 ~ 156.250MHZ</b>	<b>125.0 ~ 800.0MHZ</b>
SUPPLY VOLTAGE	$V_{DD}$	2.5V <sub>DC</sub> / 3.3V <sub>DC</sub>	3.3V <sub>DC</sub>
SUPPLY CURRENT CONSUMPTION <sup>(NOTE 1)</sup>	$I_{DD}$	<60mA	<80mA
OVERALL FREQUENCY STABILITY <sup>(NOTE 2)</sup>	$\Delta f/F_N$	$\pm 20\text{PPM}, \pm 25\text{PPM}, \pm 50\text{PPM}, \pm 100\text{PPM}$	
OPERATING TEMPERATURE RANGE	$T_{OP}$	$-10^\circ\text{C} \sim +70^\circ\text{C}$ OR $-40^\circ\text{C} \sim +85^\circ\text{C}$	
AGING FIRST YEAR	$(\Delta f/F_N)y1$	$\pm 3\text{PPM}$	
OUTPUT WAVEFORM / LOAD	— / $C_L$	LVC MOS / 15PF	
OUTPUT VOLTAGE LEVELS	$V_{OH} / V_{OL}$	$\geq 90\%V_{DD} / \leq 10\%V_{DD}$	
RISE AND FALL TIMES	$t_R$ AND $t_F$	1ns TYP, 2ns MAX	
OUTPUT SYMMETRY (DUTY CYCLE)	DC	40/60% OR 45/55%	
PHASE JITTER (12KHZ≤FJ≤20MHZ)	$J_{RMS}$	0.2ps TYP (FOR 155.520MHZ)	0.4ps TYP (FOR 155.520MHZ)
PHASE NOISE <sup>(NOTE 3)</sup>	$\ell(\Delta f)$	-70 / -108 / -134 / -142 / -143dBc	-62 / -95 / -120 / -125 / -129dBc
STANDBY FUNCTION (E/D ON PIN 1)	E/D	PIN1=HIGH OR OPEN -> OUTPUT PIN3 ACTIVE	PIN1=LOW -> OUTPUT PIN3 HIGH IMPED.
POWER RAMP UP RATE ( $V_{DD}$ AT 90%)	$t_{PU}$	0.1 ~ 100ms (MONOTONIC RAMP UP)	

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.

NOTE 3: PHASE NOISE TYPICAL AT 10HZ / 100HZ / 1KHZ / 10KHZ / 100KHZ FOR 155.520MHZ

#### MECHANICAL DIMENSIONS



### CRYSTAL OSCILLATOR UNIT WITH LVCMOS OUTPUT IN CERAMIC SEAM SEAL SMD PACKAGE, SIZE 7.0 X 5.0MM WITH 6 PADS.

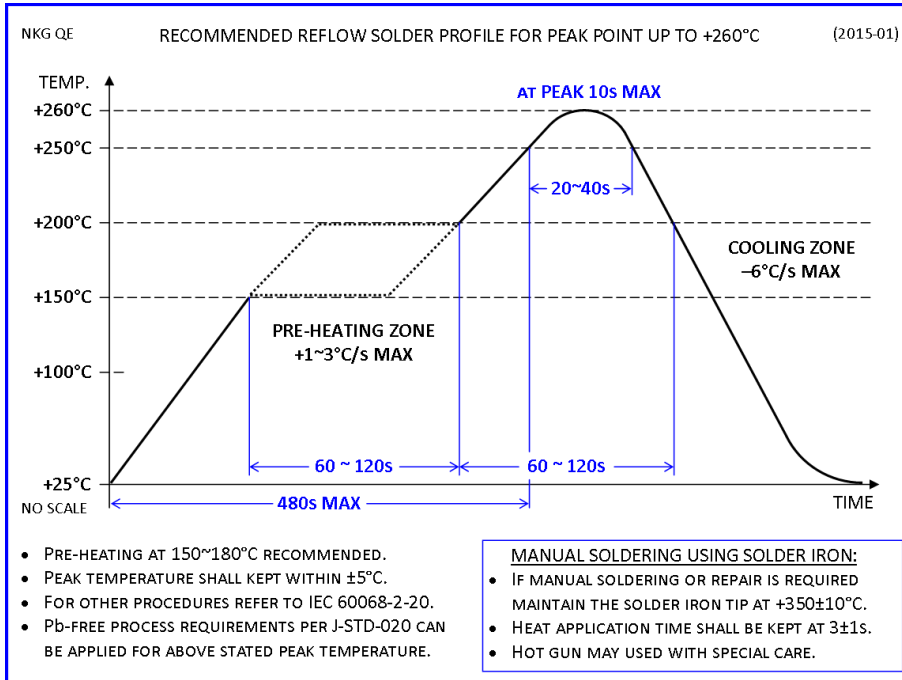
# SCH3

#### 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.

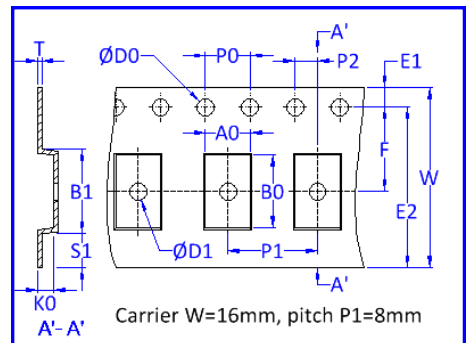


#### SOLDERING RECOMMENDATIONS



#### PACKAGING INFORMATION

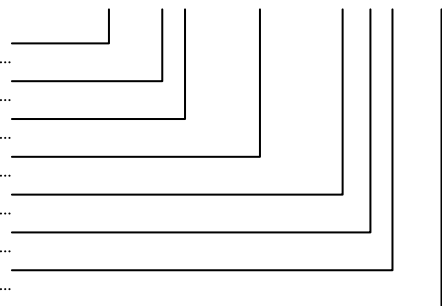
- PACKAGING IN TAPE & REEL IN COMPLIANCE TO EIA-481.
- QTY PER REEL: 1,000PCS
- REEL DIA A=180MM.
- EMBOSSED CARRIER TAPE WIDTH W = 16MM.
- COMPONENT PITCH P1 = 8MM.



#### PART NUMBER SYNTAX

- PART NUMBER FAMILY (REPRESENTS PRODUCT MODEL W/ CMOS OUTPUT AND PACKAGE SIZE)
- SUPPLY VOLTAGE NOMINATOR (I.E. 6= 3.3V, 7= 1.8V, 8= 2.8V, 9= 2.5V)
- 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= 40/60%, T= 45/55%)
- OUTPUT LOAD DESIGNATOR (I.E. S= STANDARD 15PF, C= 20PF, D= 25PF, E= 30PF, G= 50PF)
- PART NUMBER EXTENSION (ONLY FOR NON-STANDARD OR CUSTOMIZED PARTS)

### SCH3 6 B 125.000 MTS-EXT



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.

HONG KONG:  
NAKAGAWA ELECTRONICS LIMITED  
+852 2389 9201 sales@nkg.com.hk  
+852 2341 0001 www.nkg.com.hk

China Shenzhen office:  
深圳中川晶体电子有限公司  
+86(0)755 2598 2648 sales\_sz@nkg.cn  
+86(0)755 2598 2390 www.nkg.com.hk

China Suzhou office:  
苏州纳美电子有限公司  
+86(0)512 8818 7890 sales\_nm@nkg.cn  
+86(0)512 8818 7889 www.nkg.com.hk