

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

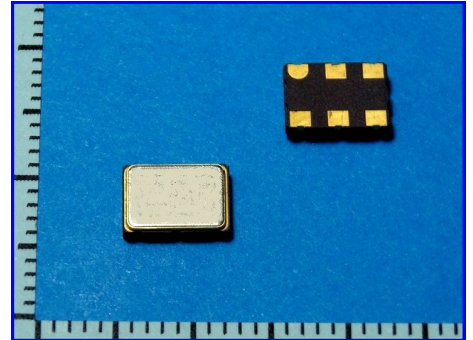
S6VC7 / SVHH7

PRODUCT FEATURES

- VCXO IN SMD PACKAGE SIZE 7.0 X 5.0 X 1.8MM WITH 6 PADS.
- WIDE FREQUENCY RANGE 1.0 TO 245MHZ.
- LOW JITTER AND PHASE NOISE DESIGNS.
- HIGHLY RELIABLE SEAM SEAL PACKAGE PROVIDING LOW AGING RATE.

APPLICATIONS

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



PRODUCT SPECIFICATIONS

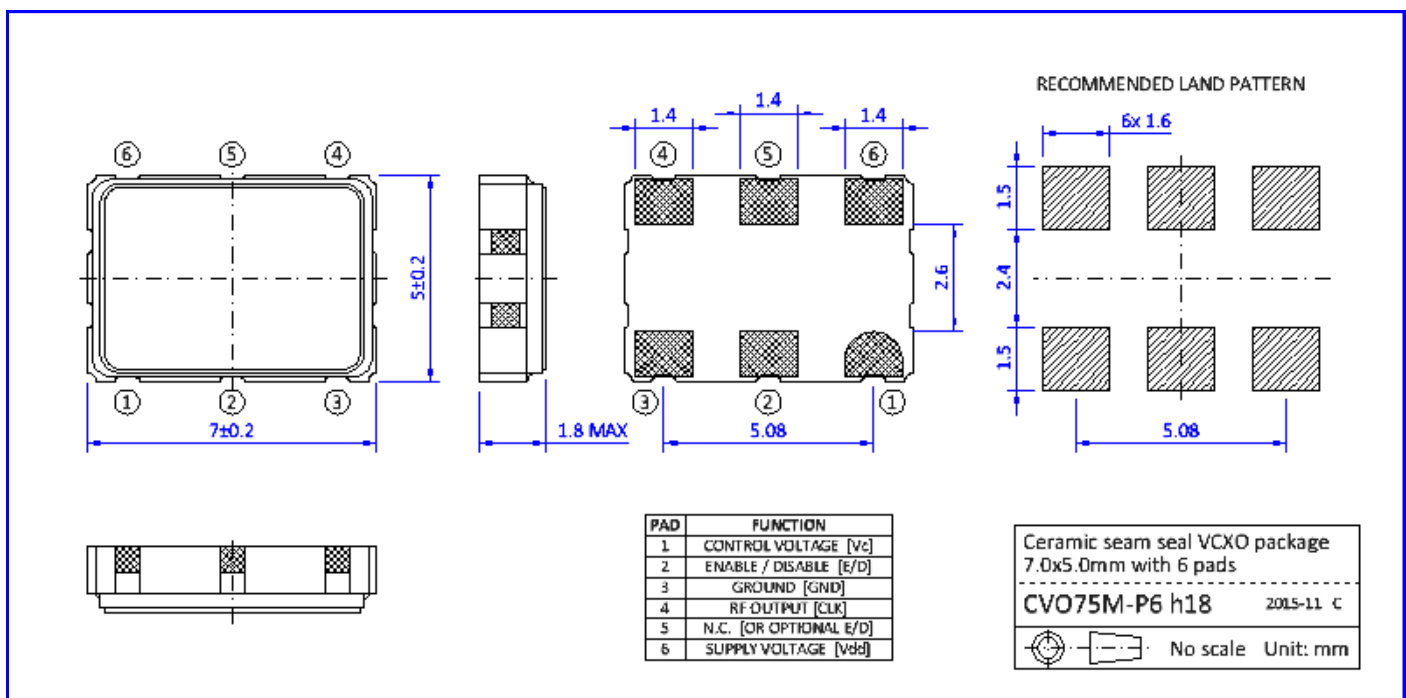
PARAMETER	SYMBOL	S6VC7 PARAMETER VALUES	SVHH7 PARAMETER VALUES
OSCILLATOR MODE	—	FUNDAMENTAL OR OVERTONE CIRCUIT	MULTIPLIER CIRCUIT
NOMINAL FREQUENCY	F_N	1 ~ 60MHZ / 60 ~ 160MHZ	50 ~ 245MHZ
SUPPLY VOLTAGE	V_{DD}	1.8V _{DC} / 2.5V _{DC} / 3.3V _{DC} / 5.0V _{DC}	2.5V _{DC} / 3.3V _{DC} / 5.0V _{DC}
SUPPLY CURRENT CONSUMPTION ^(NOTE 1)	I_{DD}	<35mA	<50mA
OVERALL FREQUENCY STABILITY ^(NOTE 2)	$\Delta f/F_N$	±25PPM, ±50PPM, ±100PPM	
AGING FIRST YEAR	$(\Delta f/F_N)_Y1$	±3PPM	
CONTROL VOLTAGE RANGE	V_C	0.2 ~ 2.3V (@V _{DD} =2.5V) / 0.3 ~ 3.0V (@V _{DD} =3.3V) / 0.5 ~ 4.5V (@V _{DD} =5.0V)	
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	HCMOS & LVC MOS / 15PF	
OUTPUT VOLTAGE LEVELS	V_{OH} / V_{OL}	≥90%V _{DD} / ≤10%V _{DD}	
RISE AND FALL TIMES	t_R AND t_F	6.0ns MAX	3.0ns MAX
OUTPUT SYMMETRY (DUTY CYCLE)	DC	50±10% OR 50±5%	
PHASE JITTER (12KHZ≤F _J ≤20MHZ)	J_{RMS}	1.0ps TYP (for 27MHz)	0.6ps TYP (for 156.250MHz)
PHASE NOISE ^(NOTE 3)	$\ell(\Delta f)$	-75 / -104 / -132 / -145 / -148dBc	-55 / -85 / -109 / -116 / -120dBc
STANDBY FUNCTION (E/D ON PIN 2)	E/D	PIN2=HIGH OR OPEN -> OUTPUT PIN4 ACTIVE	PIN2=LOW -> OUTPUT PIN4 HIGH IMPED.

NOTE 1: CURRENT CONSUMPTION IS TYPICAL FOR 3.3V, AT LOWER SUPPLY VOLTAGES LESS CONSUMPTION APPLIES. UNITS WITH 5.0V FOR CERTAIN FREQ. STILL AVAILABLE.

NOTE 2: OVERALL FREQUENCY STABILITY INCLUDES TOLERANCE, DEVIATIONS OVER OPERATING TEMPERATURE, DUE TO OUTPUT LOAD AND SUPPLY VOLTAGE DEVIATIONS.

NOTE 3: PHASE NOISE TYPICAL AT 10HZ / 100HZ / 1KHZ / 10KHZ / 100KHZ FOR 27MHZ AND 156.250MHZ

MECHANICAL DIMENSIONS



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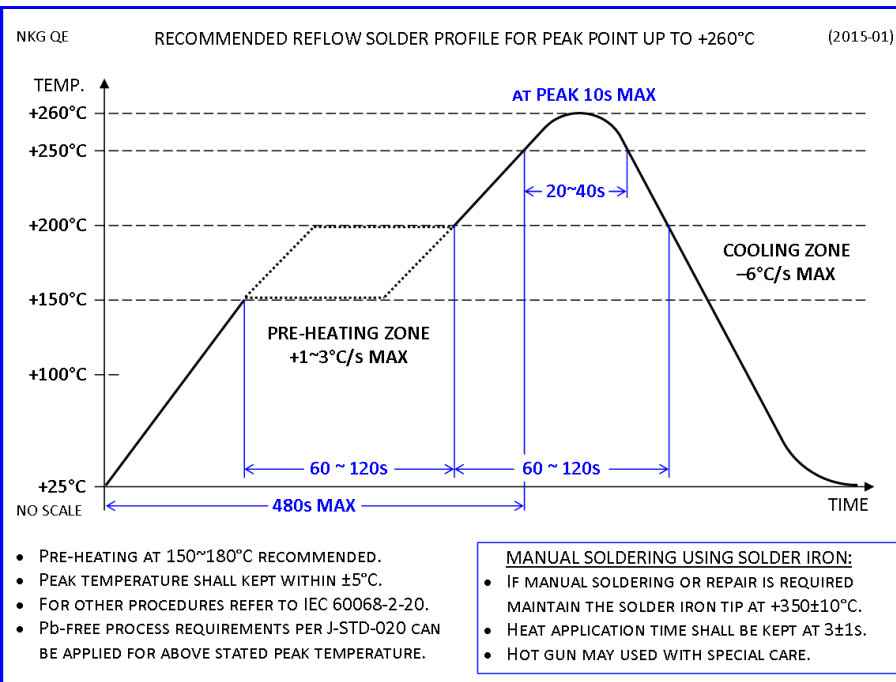
S6VC7 / SVHH7

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.

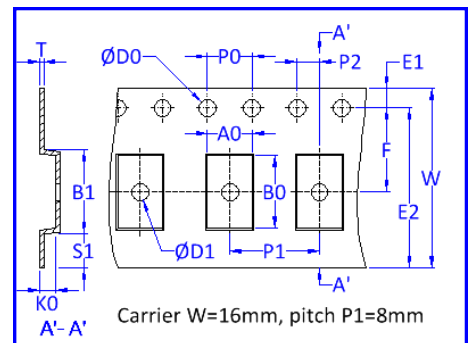


SOLDERING RECOMMENDATIONS



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 = 16MM.
- COMPONENT PITCH P1 = 8MM.



PART NUMBER SYNTAX

PART NUMBER FAMILY (REPRESENTS MODEL WITH HCMOS 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%)

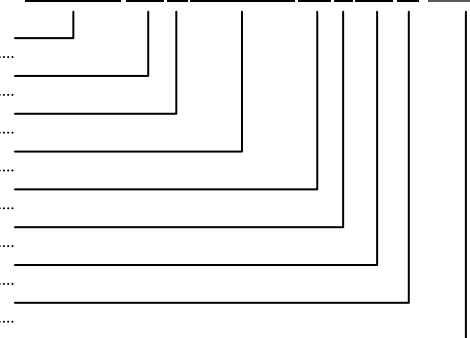
FREQUENCY PULLING RANGE (VALUE IN PPM I.E. 50= ±50PPM, 100= ±100PPM)

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.

S6VC7 33 B 50.000 MT 50 A -EXT



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