



■ ELECTRICAL SPECIFICATION

PARAMETER		VALUE
Frequency Range		13.500 ~ 96.000 MHz
Operating Temperature Range		-20°C ~ +70°C Standard -40°C ~ +85°C X -40°C ~ +125°C X1
Frequency Stability**		±20 ppm, ±25 ppm, ±30 ppm, ±50 ppm, ±100ppm
First Year Aging		±3ppm
Storage Temperature Range		-55°C ~ +125°C
Supply Voltage (Vcc), ±5%		1.8 V, 2.5 V, 3.3 V, 2.5 ~ 3.3 V
Supply Current		40 mA max
Output HCSL	Symmetry (Duty Cycle)	45 % ~ 55 %
	Rise / Fall Time	0.6 ns max at 20 % ~ 80 % output swing level
	Logic "0" Level	V _{OL} = -0.15 V min
	Logic "1" Level	V _{OH} = 0.90 V max
	Load	50 Ω
Enable / Disable Function		Pin 1: High or Open / Output enabled (Pins 4 & 5) Pin 1: Low / Output disabled (High impedance)
Output Enable Time		10 ms max
Output Disable Time		0.2 μs max
Output Swing		0.50 V min
Stand By Current		10 μA max
Start Up Time		10 ms max
Phase Jitter RMS @27MHz*	@Vcc=3.3V (12kHz ~ 20 MHz)	507.86 fs typ
Phase Noise @27MHz, Vcc=3.3V* typ	@ 10Hz	-96.04 dBc/Hz
	@ 100Hz	-120.66 dBc/Hz
	@ 1kHz	-136.92 dBc/Hz
	@ 10kHz	-146.58 dBc/Hz
	@ 100kHz	-151.19 dBc/Hz
	@ 1MHz	-150.97 dBc/Hz
	@ 5MHz	-151.48 dBc/Hz

Note: *The Phase Noise/Jitter value varies with frequency and supply voltage.

Note**: Not all Stabilities are available for all operating temperature ranges. See the table below.

■ STABILITY AVAILABLE AT EACH OPERATING TEMPERATURE

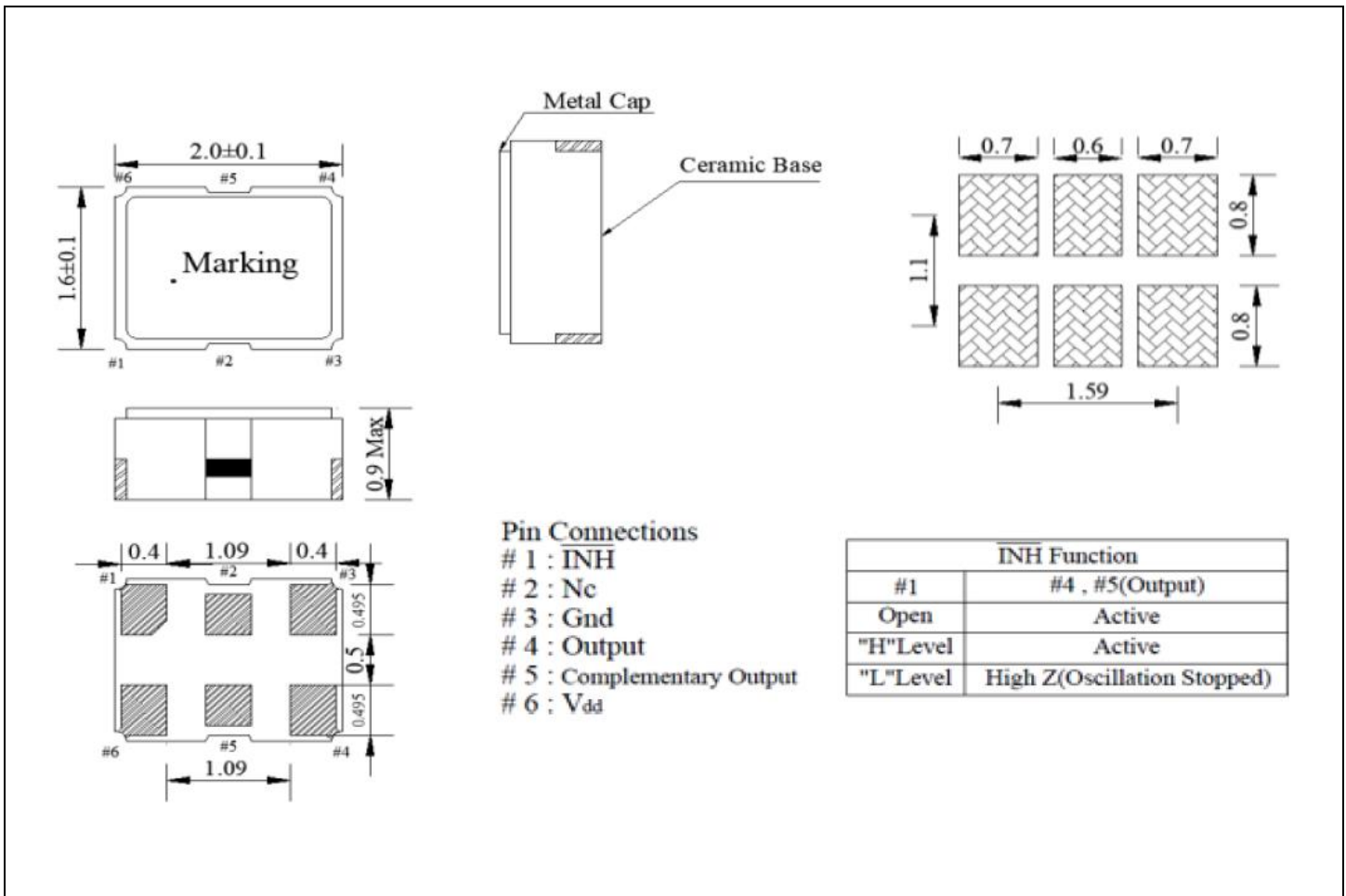
	-20°~70°C	-40°~85°C	-40°~100°C	-40°~105°C	-40°~125°C
±20ppm	●	▲			
±25ppm	●	●			
±30ppm	●	●	▲	▲	
±50ppm	●	●	●	●	▲
±100ppm	●	●	●	●	●

Inclusive of 25° Tolerance, Operating Temperature Range, Voltage & Load Variations

●: Available

▲: Contact for availability

■ MECHANICAL SPECIFICATION



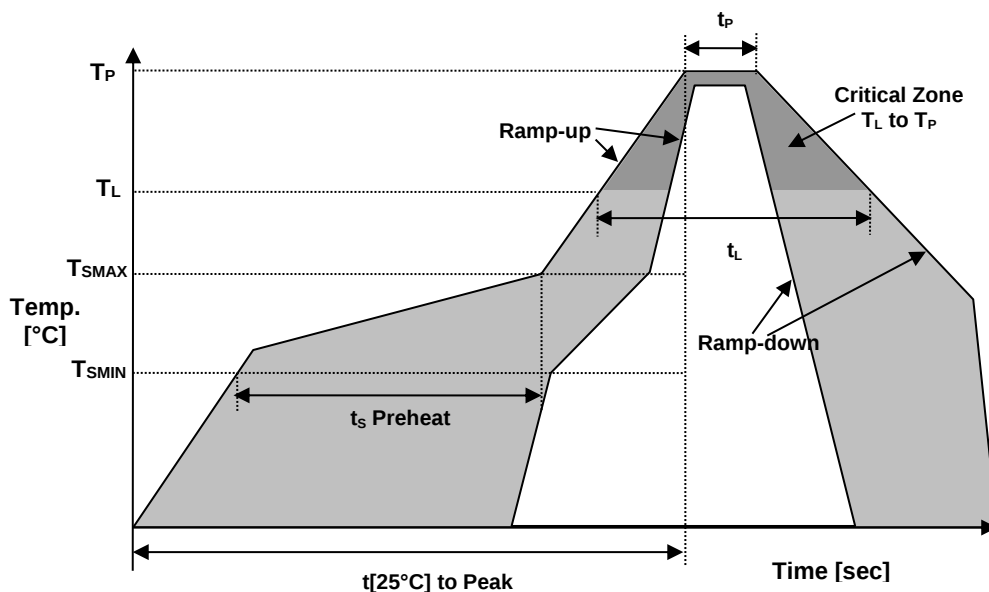
■ PART NUMBERING SYSTEM

TYPE	SERIES	-	FREQUENCY (MHz)	-	SUPPLY VOLTAGE (Vcc)	-	STABILITY (ppm)	-	TEMPERATURE RANGE (°C)	-	SYMMETRY (Duty Cycle)	-	TAPE & REEL
Clock Oscillator CHF	2016	-	13.500 ~ 96.000 MHz	-	1.8: Vcc=1.8 2.5: Vcc=2.5 3.3: Vcc=3.3 L: Vcc=2.5~3.3	-	20: ±20 ppm 25: ±25 ppm 30: ±30 ppm 50: ±50 ppm 100: ±100 ppm	-	blank: -20°C to +70°C X: -40°C to +85°C X1: -40°C to +125°C	-	T: 45 to 55%	-	TR

EXAMPLE: CHF2016-50.000-3.3-100-X-T-TR

Surface Mount CHF2016 HCSL Oscillator, 2.0 x 1.6 mm, 50.000 MHz, 3.3 VDC Supply Voltage, ±100 ppm Stability from -40°C to +85°C, Symmetry 45% to 55%, Tape and Reel Packaging.

■ REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	$T_{S\text{MIN}}$	150°C
Temperature Max Preheat	$T_{S\text{MAX}}$	200°C
Time ($T_{S\text{MIN}}$ to $T_{S\text{MAX}}$)	t_s	60-180 sec.
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/sec max.
Ramp-down rate	R_{DOWN}	6°C/sec max.
Time within 5°C of Peak Temperature	t_p	10 sec.
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ to Peak	480 sec.
Time	t_L	60-150 sec.

■ ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH SVHC	COMPLIANT
RoHS	COMPLIANT
TERMINATION FINISH	Au

