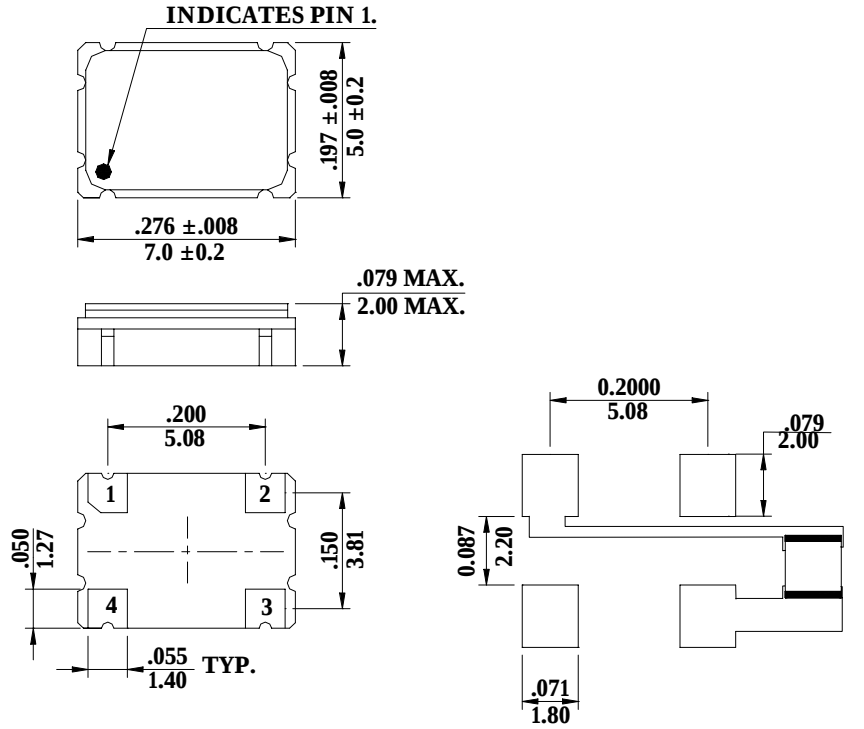
LOW CURRENT 5X7 HCMOS CLOCK

- **SUITABLE FOR MOBILE APPLICATIONS**
- **AVAILABLE AT 2.7…5Vdc SUPPLY VOLTAGES**

ROHS COMPLIANT

- **MECHANICAL SPECIFICATION**



RECOMMENDED LAND PATTERN

OUTLINE TOLERANCE:
±0.006" / 0.15mm
(Unless otherwise specified)

PIN FUNCTIONS:
[1] ENABLE / DISABLE
[2] CASE GROUND
[3] OUTPUT
[4] SUPPLY VOLTAGE

MARKING:
TBD

***0.01µF external by-pass filter is recommended as seen on solder pattern.**

Dimensions = Inch/mm

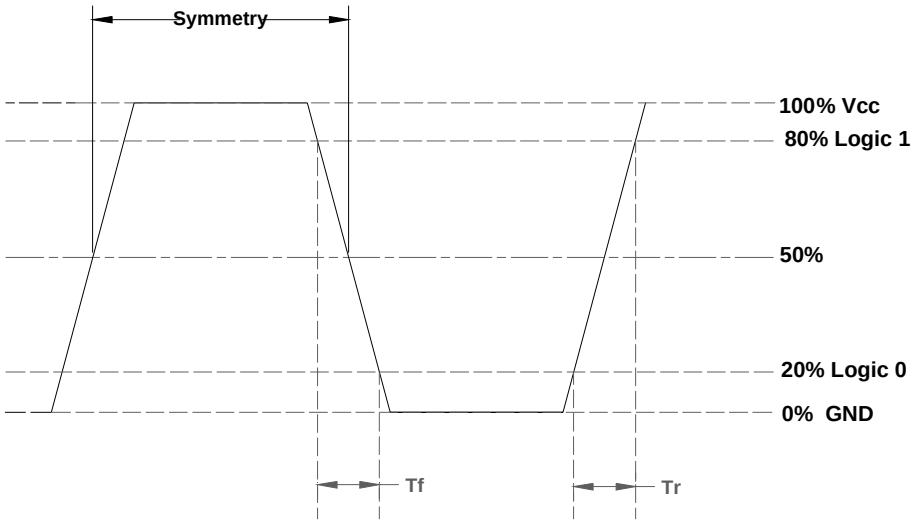
- **ELECTRICAL SPECIFICATION**

PARAMETER	SYMBOL	CONDITIONS	VALUE		UNIT
Frequency, nom	fo	-	4.000~30.000		MHz
Supply voltage, nom.	Vcc	Vcc±5%	2.7…3.3	5.0	V
Supply current, max.	Is	Vcc=2.7…5.0VDC, Ta=+25°C, load=15pF	3.0	4.6	mA
HCMOS output levels	VOH VOL	Vcc=2.7…5.0VDC, load=15pF Vcc=2.7…5.0VDC, load=15pF	2.2 min. 0.4 max.	4.0 min. 0.4 max.	V V
Duty cycle	DC	load=15pF / @50%Vcc, Ta=+25°C	40…60 OR 45…55		%
Rise- / fall time, max.	tr / tf	20%~80% Vout, 80%~20% Vout	3.0…10.0 (SEE NOTE A)		ns
Jitter, rms, max.	J	1σ, Fj = 12KHz…20MHz	1.0		ps
Overall freq. stability, max.	Δf/fc	Including temperature, 10 year aging, +/-5% load & supply variations, and calibration @ +25°C.	SEE PART NUMBER GENERATION TABLE		ppm
Enable option (pin 1) Disable option (pin 1)	En Dis	High or open (min.) Ground **(output pin high impedance)** (max.)	0.7Vcc 0.3Vcc		V V
Operating temperature range	Ta	Vcc=2.7…5.0VDC, Ta=+25°C, load=15pF	SEE PART NUMBER GENERATION TABLE		°C
Storage temperature range	T(stg)	-	-55…+125		°C
Absolute voltage range	Vcc(abs)	Non-destructive, DC	-0.5…+7.0		V

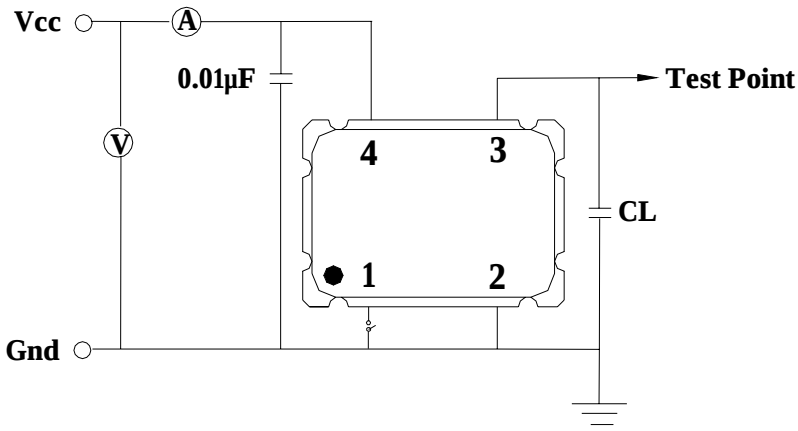
7/13/05marketing-rfq, vcxo, Cx90ns

NOTE A: RISE AND FALL TIMES ARE FREQUENCY DEPENDENT.

WAVEFORM: LOAD = 15pF



RECOMMENDED TEST CIRCUIT WITH CMOS LOAD:



***CL (Capacitive Load): Includes the input capacitance of oscilloscope.**
****0.01µF external by-pass filter is recommended.**

■ **PART NUMBER GENERATION**

SERIES	SYMMETRY	TEMPERATURE RANGE (°C)	STABILITY (Overall)	FREQUENCY (MHz)	SUFFIX
CSG: 2.7V HCMOS CS4: 3.3V HCMOS CS2: 5.0V HCMOS	A: 40%…60% **T: 45%…55%***	R: 0…+50 S: 0…+70 U: -20…+70 X: -20…+80	I: ±25 ppm H: ±50 ppm J: ±100 ppm **(See note 1 below)**	4.000…30.000	LC (LOW CURRENT)

7/13/05 marketing-rfq, vcxo, Cx90ns

NOTE 1:
Variations from standard specification are available, please contact factory.
***For 2.7VDC…3.3VDC SUPPLY, 45%…55% symmetry is only available up to 16MHz.**
EXAMPLE: CSGASH-27.000-LC

- **REFLOW PROFILE**