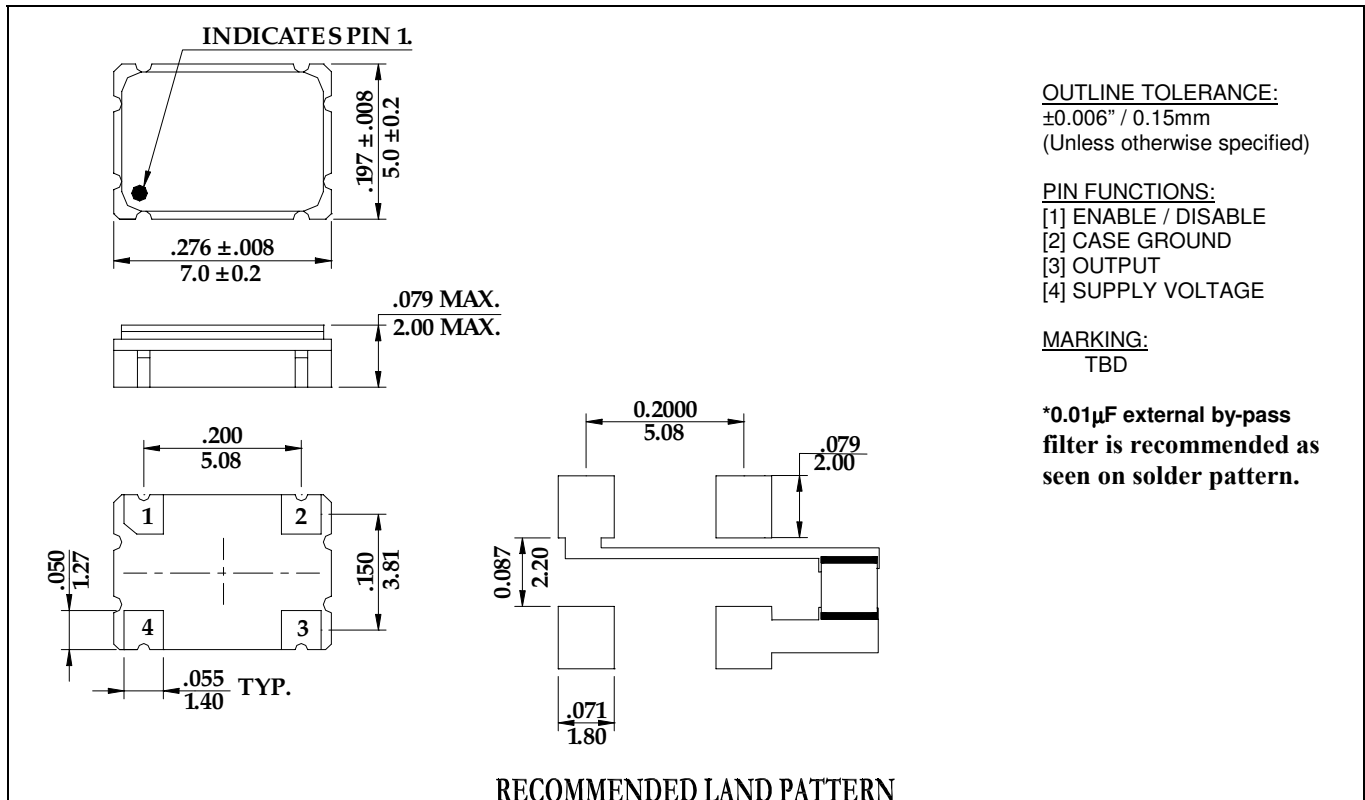


ULTRA LOW VOLTAGE 5X7 HCMOS CLOCK (see below for part numbering scheme)

■ APPROVALS

RALTRON	CUSTOMER
Eng. approval, date: CHUCK 7/8/03	Name (please print):
Sales approval, date:	Title (please print):
Created by, date: C.VALES 7/8/03	Signature, date:
Revision:	

■ MECHANICAL SPECIFICATION

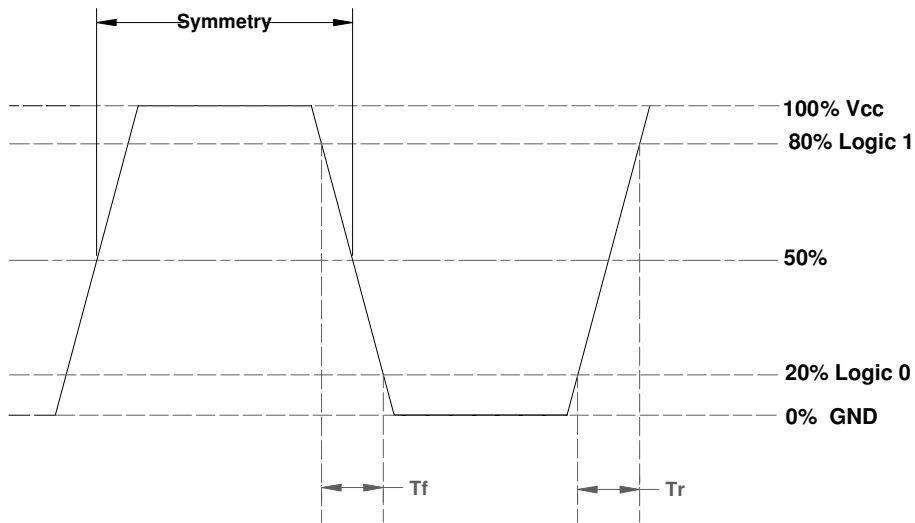
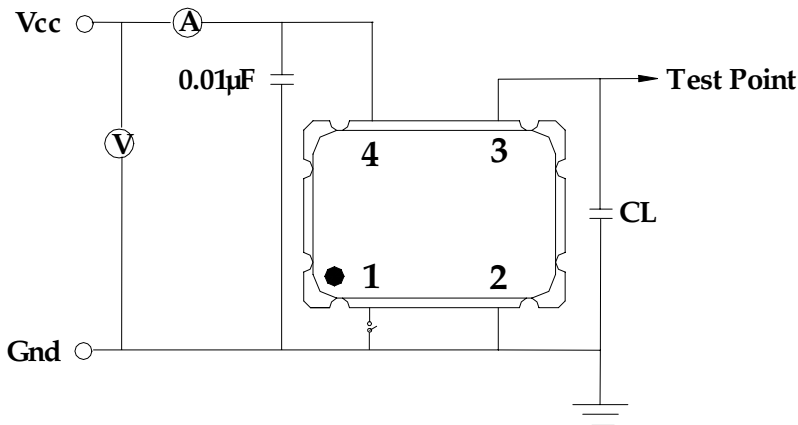


■ ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Frequency, nom	fo	-	20.000~70.000	MHz
Supply voltage, nom.	Vcc	Vcc±5%	SEE PART NUMBER GENERATION TABLE	V
Supply current, max.	Is	Vcc=1.6...2.0VDC, Ta=+25°C, load=15pF	5.0	mA
HCMOS output levels	VOH VOL	Vcc=1.6...2.0VDC, load=15pF Vcc=1.6...2.0VDC, load=15pF	1.1 min. (1.3 typ.) 0.4 max. (0.3 typ.)	V V
Duty cycle	DC	load=15pF / @50%Vcc, Ta=+25°C	40...60	%
Rise- / fall time, max.	tr / tf	20%~80% Vout, 80%~20% Vout	1.0...3.5 (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)	En	High or open (min.)	0.7Vcc	V
Disable option (pin 1)	Dis	Ground (output pin high impedance) (max.)	0.3Vcc	V
Operating temperature range	Ta	Vcc=1.6...2.0VDC, 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...+3.6	V

4/2/02 marketing-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
CSL: 1.6V HCMOS CSJ: 1.8V HCMOS CSK: 2.0V HCMOS	A: 40%...60%	R: 0...+50 S: 0...+70 U: -20...+70 X: -20...+80	H: ±50 ppm J: ±100 ppm (See note 1 below)	20.000...70.000	TR (TAPE/REEL)

4/2/02 marketing-rfq, vcxo, Cx90ns

NOTE 1:

Variations from standard specification are available, please contact factory.

EXAMPLE: CSLASH-44.736-TR