

### SERIES CO1 AND CO13

#### FEATURES

- STANDARD 8 AND 14 PIN DIP PACKAGE
- TOLERANCE AND STABILITY TO  $\pm 25$  PPM
- LOW COST
- AVAILABLE IN 3.3 VOLT

#### SPECIFICATIONS

SERIES		CO1	CO13
PACKAGE		14 PIN DIP	8 PIN DIP
FREQUENCY RANGE		500.00 KHz TO 125.00 MHz	500.00 KHz TO 125.00 MHz
FREQUENCY STABILITY†		CO1100 : ±100 ppm	CO13100 : ±100 ppm
		CO1050 : ±50 ppm	CO13050 : ±50 ppm
		CO1025 : ±25 ppm	CO13025 : ±25 ppm
OPERATING TEMPERATURE RANGE		0° C TO +70° C STANDARD -40° C TO +85° C EXTENDED	0° C TO +70° C STANDARD -40° C TO +85° C EXTENDED
STORAGE TEMPERATURE RANGE		-55° C TO +125° C	-55° C TO +125° C
INPUT	VOLTAGE††	+5 VDC ±0.5 VDC	+5 VDC ±0.5 VDC
	CURRENT (MAX)	500.00 KHz TO 2.999 MHz: 30 mA	500.00 KHz TO 2.999 MHz: 30 mA
		3.00 MHz TO 31.999 MHz: 50 mA	3.00 MHz TO 31.999 MHz: 50 mA
		32.00 MHz TO 79.999 MHz: 70 mA	32.00 MHz TO 79.999 MHz: 70 mA
		80.00 MHz TO 125.00 MHz: 80 mA	80.00 MHz TO 125.00 MHz: 80 mA
OUTPUT	SYMMETRY (AT 1.4 VDC LEVEL)	40 TO 60% NORMAL 45 TO 55% TIGHT	40 TO 60% NORMAL 45 TO 55% TIGHT
	RISE AND FALL TIME (0.4 - 2.4 VDC)	UNDER 9 MHz : ±15 ns MAX	UNDER 9 MHz : ±15 ns MAX
		9 MHz TO 32 MHz : ±10 ns MAX	9 MHz TO 32 MHz : ±10 ns MAX
		32 MHz TO 80 MHz : ±6 ns MAX	32 MHz TO 80 MHz : ±6 ns MAX
		80 MHz TO 125 MHz : ±4 ns MAX	80 MHz TO 125 MHz : ±4 ns MAX
	LOGIC "0" LEVEL	+0.5 V MAX, SINK TO 16 mA	+0.5 V MAX, SINK TO 16 mA
	LOGIC "1" LEVEL	+2.4 V MIN, SOURCE 0.4 mA	+2.4 V MIN, SOURCE 0.4 mA
LOAD†††		1 TO 10 TTL STANDARD	1 TO 10 TTL STANDARD

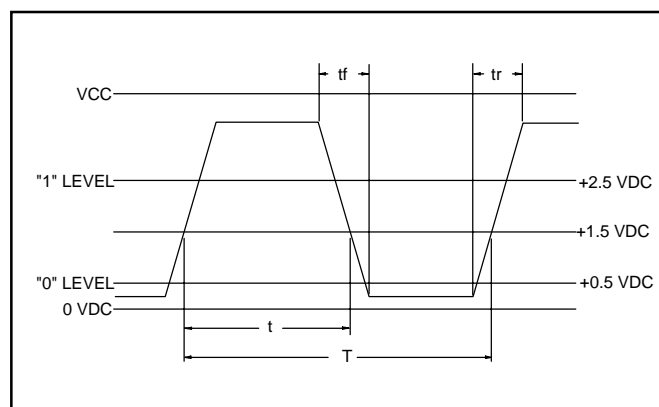


† FREQUENCY STABILITY INCLUSIVE OF ROOM TOLERANCE,  
FREQUENCY STABILITY OVER TEMPERATURE, 10% POWER SUPPLY VARIATION, AGING, SHOCK, AND VIBRATION  
†† +3.3 VOLT VERSION IS AVAILABLE. CONSULT RALTRON FOR SPECIFICATIONS  
††† OUTPUT LOADS ALSO AVAILABLE AT 15 pF, 30 pF AND 50 pF. CONSULT RALTRON FOR SPECIFICATIONS

#### ENVIRONMENTAL AND TECHNICAL CONDITIONS

ENVIRONMENTAL	
TEMPERATURE CYCLE	MIL-STD 883, METHOD 1010, 10 CYCLES -20° C TO 85° C
SHOCK	MIL-STD-202, METHOD 213, TEST CONDITION C
VIBRATION	MIL-STD-202, METHOD 204, TEST CONDITION A
RESISTANCE TO SOLDERING HEAT	MIL-STD-202, METHOD 210, TEST CONDITION B
HUMIDITY	85% RELATIVE HUMIDITY AT 85° C 250 HOURS
MECHANICAL	
GROSS LEAK TEST	MIL-STD-883, METHOD 1014, TEST CONDITION C
FINE LEAK TEST	MIL-STD-883, METHOD 1014, TEST CONDITION A
TERMINAL STRENGTH	MIL-STD-202, METHOD 211, TEST CONDITION A AND C
MARKING INK	EPOXY, HEAT CURED.
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, OMIT STEP 7B
SOLDERABILITY	MIL-STD-202, METHOD 208, 95% COVERAGE
SOLVENT RESISTANCE	MIL-STD-202, METHOD 2002, METHOD 215

#### OUTPUT WAVEFORM

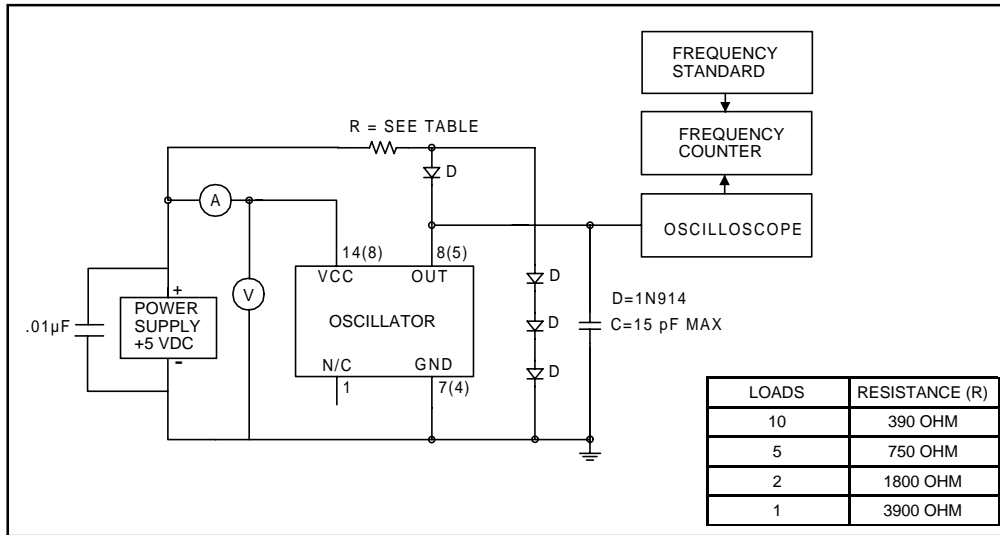


#### PART NUMBERING SYSTEM

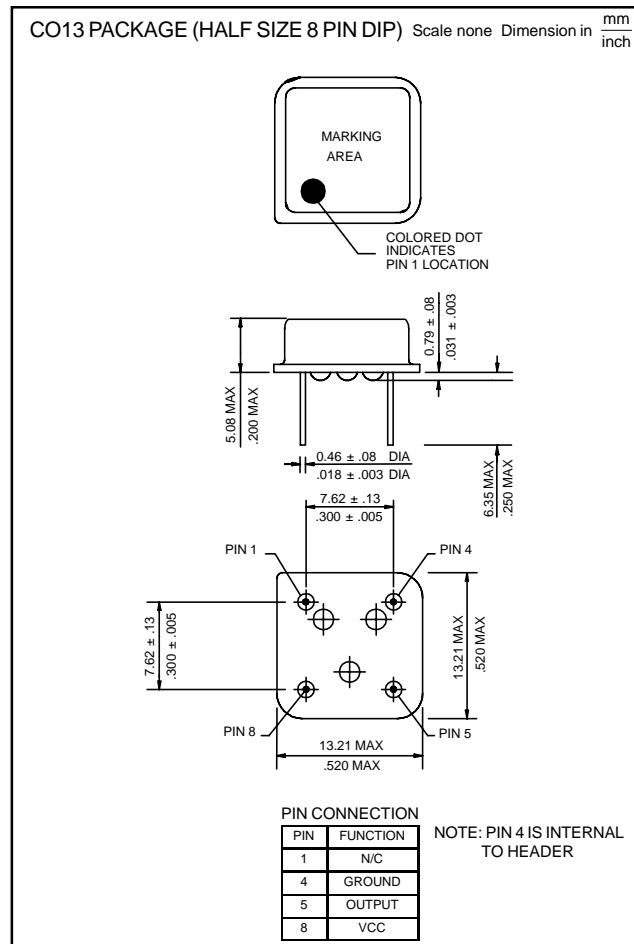
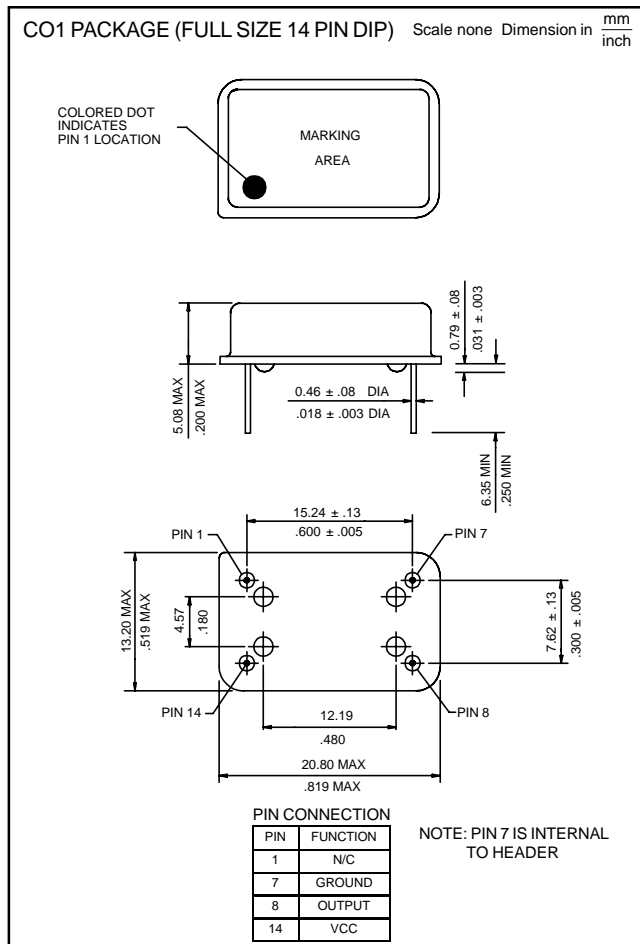
SERIES		FREQUENCY STABILITY		FREQUENCY	EXTENDED TEMPERATURE	SYMMETRY		OPTIONS	
CO1 CO13	(14 PIN DIP) (8 PIN DIP)	100 050 025	±100 PPM ±50 PPM ±25 PPM		IN MHz	EXT	T	TIGHT SYMMETRY	TR GW 3.3V

EXAMPLE: CO1100-20.000-EXT-T, CO13050-32.000-T-TR

#### ● TEST CIRCUIT



#### ● OUTLINE DRAWINGS



#### ● PACKAGING

14 PIN DIP: 25 PIECES PER ELECTROSTATIC TUBE  
8 PIN DIP: 40 PIECES PER ELECTROSTATIC TUBE