

### 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 : $\pm 100$ ppm	CO13100 : $\pm 100$ ppm
		CO1050 : $\pm 50$ ppm	CO13050 : $\pm 50$ ppm
		CO1025 : $\pm 25$ ppm	CO13025 : $\pm 25$ 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 $\pm 0.5$ VDC	+5 VDC $\pm 0.5$ 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
		UNDER 9 MHz : $\pm 15$ ns MAX	UNDER 9 MHz : $\pm 15$ ns MAX
	RISE AND FALL TIME (0.4 - 2.4 VDC)	9 MHz TO 32 MHz : $\pm 10$ ns MAX	9 MHz TO 32 MHz : $\pm 10$ ns MAX
		32 MHz TO 80 MHz : $\pm 6$ ns MAX	32 MHz TO 80 MHz : $\pm 6$ ns MAX
		80 MHz TO 125 MHz : $\pm 4$ ns MAX	80 MHz TO 125 MHz : $\pm 4$ 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	



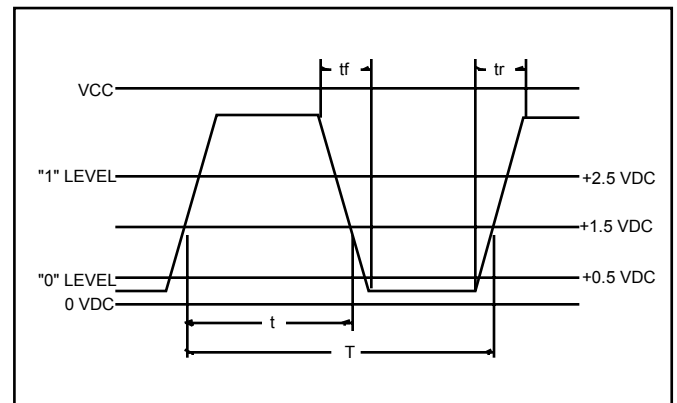
† FREQUENCY STABILITY INCLUSIVE OF ROOM TOLERANCE, FREQUENCY STABILITY OVER TEMPERATURE, 10% POWER SUPPLY VARIATION, AGING, SHOCK, AND VIBRATION  
 †† +3.3 VOLT VERSION IS AVAILABLE. CONSULT RALTRON FOR SPECIFICATIONS  
 ††† OUTPUT LOADS ALSO AVAILABLE AT 15 pF, 30 pF AND 50 pF. CONSULT RALTRON FOR SPECIFICATIONS

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#### ● 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



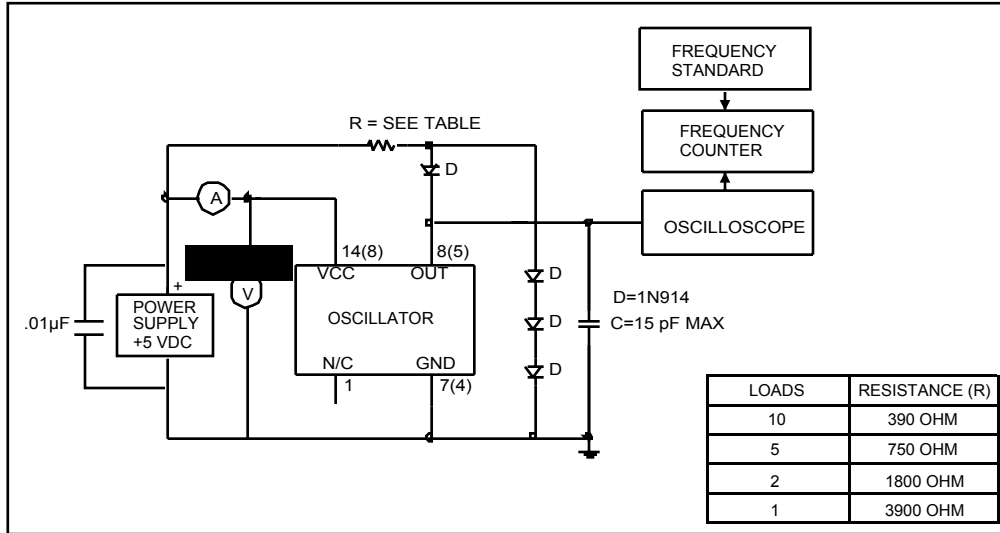
#### ● PART NUMBERING SYSTEM

SERIES		FREQUENCY STABILITY		FREQUENCY	EXTENDED TEMPERATURE	SYMMETRY	OPTIONS	
CO1	(14 PIN DIP)	100	$\pm 100$ PPM	IN MHz	EXT	T TIGHT SYMMETRY	TR	TAPE AND REEL*
CO13	(8 PIN DIP)	050	$\pm 50$ PPM				GW	GULL WING
		025	$\pm 25$ PPM				3.3	+3.3 V

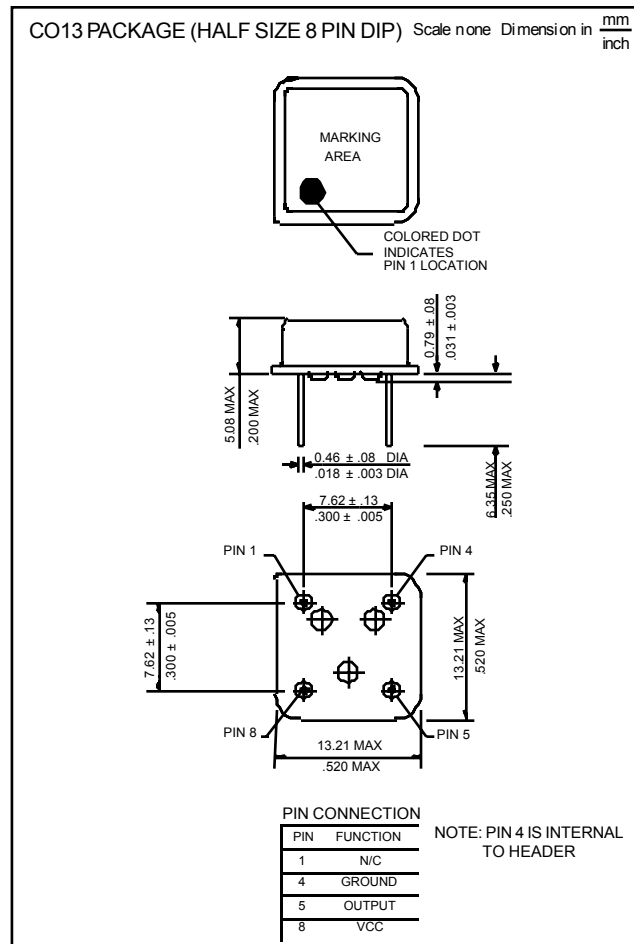
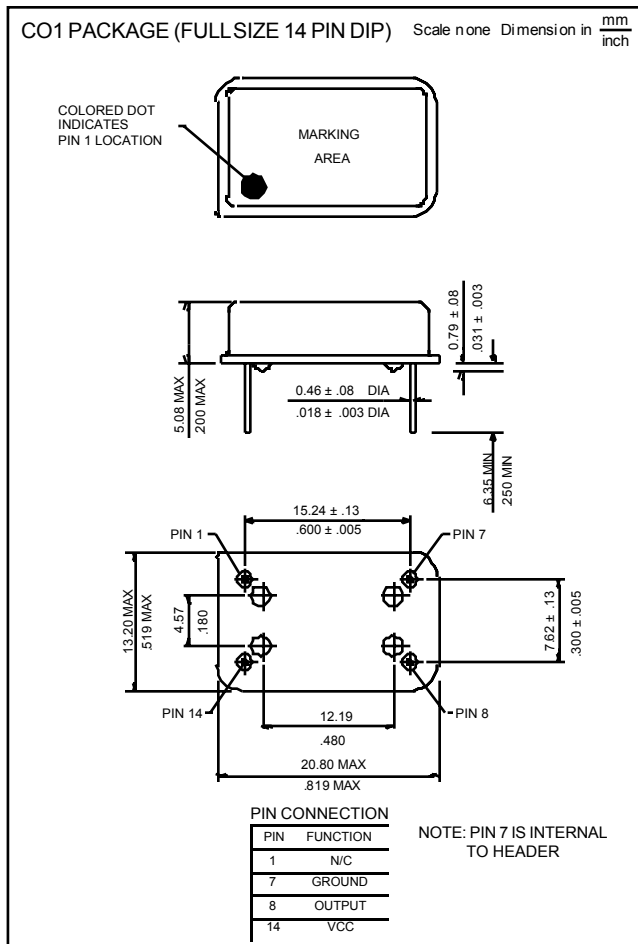
EXAMPLE: CO1100-20.000-EXT-T, CO13050-32.000-T-TR

\* Available for Gull Wing only

#### ● TEST CIRCUIT



#### ● OUTLINE DRAWINGS



#### ● PACKAGING

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