

### SERIES VC73 AC MOS

#### ● FEATURES

- STANDARD 14 PIN DIP PACKAGE
- TOLERANCE AND STABILITY TO  $\pm 10$  PPM
- CUSTOM SPECIFICATIONS
- WIDE FREQUENCY RANGE

#### ● SPECIFICATIONS

FREQUENCY RANGE	30.01 MHz TO 160.00 MHz
FREQUENCY STABILITY OVER TEMPERATURE RANGE (REF. TO 25°C)	$\pm 10$ PPM TO $\pm 50$ PPM MAX AT VC = 2.5 VDC AND VCC = +5.0 VDC (SEE TABLE 1)
OPERATING TEMPERATURE RANGE	0°C TO +50°C 0°C TO +70°C -40°C TO +85°C AT VC = +2.5 VDC AND VCC = +5.0VDC AND STANDARD LOAD
STORAGE TEMPERATURE RANGE	-40°C TO +85°C
OUTPUT WAVEFORM	ACMOS (SEE TABLE 2)
LOAD	30 pF
SUPPLY VOLTAGE	+5 VDC $\pm 5\%$ (3.3 VDC AVAILABLE)
SUPPLY CURRENT	50 mA MAX AT VC = +2.5 VDC, VCC = +5.0 VDC AND STANDARD LOAD AT 25°C
ABSOLUTE PULLING RANGE (APR)	$\pm 50$ PPM TO $\pm 100$ PPM MIN OVER CONTROL VOLTAGE RANGE AT VCC = +5.0 V AND STANDARD LOAD AT 25°C (SEE TABLE 1)
NOMINAL CONTROL VOLTAGE (VC)	+2.5 VDC $\pm 0.5$ VDC
SETTABILITY AT Vfo †	+2.5 VDC $\pm 0.5$ VDC
CONTROL VOLTAGE RANGE	+0.5 TO +4.5 VDC
LINEARITY	$\pm 10\%$ MAX
SYMMETRY	NORMAL: 40/60% TIGHT: 45/55% (OPTION)
SLOPE	POSITIVE
MODULATION FREQUENCY BANDWIDTH	10 KHz (-3dB) MIN
INPUT IMPEDANCE	47 KOHM MIN
ABSOLUTE VOLTAGE RANGE	-0.5 TO +7.0 VDC FOR VCC AND VC (NON DESTRUCTIVE)
PHASE NOISE (TYPICAL)	SEE GRAPH FOR PHASE NOISE CHARACTERISTICS



† Vfo IS THE CONTROL VOLTAGE AT WHICH THE OUTPUT FREQUENCY IS EQUAL TO THE NOMINAL FREQUENCY (Fo) AT +25 °C  $\pm 1$  °C

ABSOLUTE PULLING RANGE (APR) IS THE MINIMUM GUARANTEED FREQUENCY SHIFT FROM Fo OVER VARIATIONS IN TEMPERATURE, AGING, POWER SUPPLY, AND LOAD.

#### ● TEMPERATURE RANGE DESIGNATIONS

CODE	TEMPERATURE RANGE	TEMPERATURE STABILITY	APR (MIN)
A	0°C TO +50°C	$\pm 10$ PPM	$\pm 50$ PPM
B	0°C TO +50°C	$\pm 15$ PPM	$\pm 50$ PPM
C	0°C TO +50°C	$\pm 15$ PPM	$\pm 50$ PPM
D	0°C TO +50°C	$\pm 20$ PPM	$\pm 75$ PPM
E	0°C TO +50°C	$\pm 25$ PPM	$\pm 75$ PPM
F	0°C TO +50°C	$\pm 35$ PPM	$\pm 100$ PPM
G	0°C TO +70°C	$\pm 10$ PPM	$\pm 50$ PPM
H	0°C TO +70°C	$\pm 20$ PPM	$\pm 50$ PPM
I	0°C TO +70°C	$\pm 20$ PPM	$\pm 50$ PPM
J	0°C TO +70°C	$\pm 25$ PPM	$\pm 50$ PPM
K	0°C TO +70°C	$\pm 35$ PPM	$\pm 75$ PPM
L	0°C TO +70°C	$\pm 50$ PPM	$\pm 100$ PPM
M	-40°C TO +85°C	$\pm 20$ PPM	$\pm 50$ PPM
N	-40°C TO +85°C	$\pm 30$ PPM	$\pm 50$ PPM
O	-40°C TO +85°C	$\pm 25$ PPM	$\pm 75$ PPM
P	-40°C TO +85°C	$\pm 35$ PPM	$\pm 75$ PPM
Q	-40°C TO +85°C	$\pm 50$ PPM	$\pm 100$ PPM

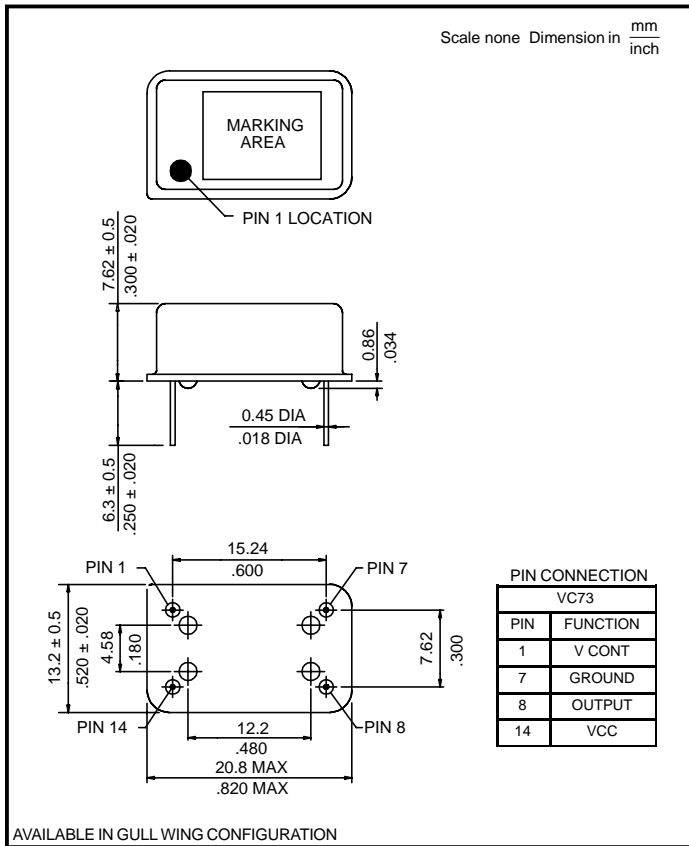
#### ● OUTPUT AND LOAD CHARACTERISTICS

ACMOS - 30 pF (VC73)	ACMOS TO DRIVE 3 GATES AT TTL LEVELS SYMMETRY: 40/60% TO 60/40% AT 50% LEVEL VOH: +2.9 VDC MIN VOL: +0.33 VDC MAX RISE/FALL TIME: 3 ns WITH 30 pF LOAD (20% TO 80%)
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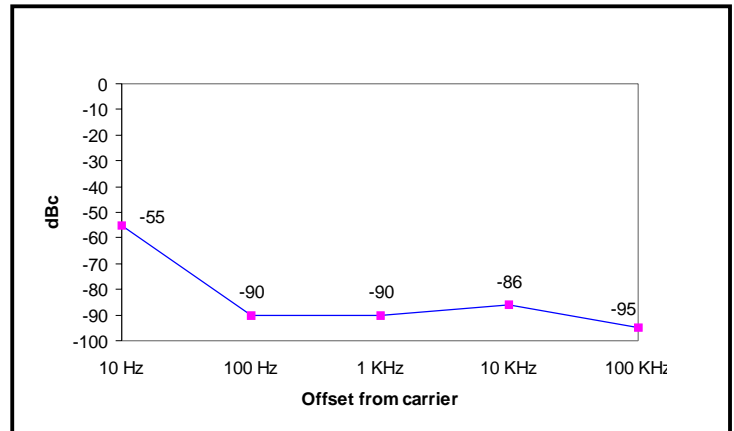
#### ● AVAILABLE OPTIONS

ENABLE / DISABLE WITH 5 PIN BASE  
5.08 mm / .200 in MAXIMUM HEIGHT WITH OPEN BLANK DESIGN  
CONSULT RALTRON FOR SPECIFICATIONS

#### ● OUTLINE DRAWING



#### ● PHASE NOISE CHARACTERISTICS



#### ● PART NUMBERING SYSTEM

SERIES	OUTPUT (TABLE 2)	CODE (TABLE 1)	FREQUENCY
VC7	3	ACMOS	A THROUGH Q
			IN MHZ

EXAMPLE:

VC73J-155M52

ACMOS OUTPUT,  $\pm 25$  PPM OVER  $0^{\circ}$  C TO  $+70^{\circ}$  C

MINIMUM APR  $\pm 50$  PPM

155.52 MHz

#### ● MECHANICAL CHARACTERISTICS

MECHANICAL SHOCK	IEC-68-2-27 TEST EA, 30g FOR 18 ms HALFSINE
VIBRATION	IEC 68-2-6 (TEST FC) 0.35 mm, 5g, 10-2 kHz, 6 CYCLES AXIS
THERMAL SHOCK	IEC 68-2-14 (TEST NA), 30 min IN EACH TEMPERATURE EXTREME
SEAL	IEC 68-2-17 (TEST QC)
SOLDERING HEAT	IEC 68-2-20A
MECHANICAL	14 PIN DIP, LEADED, PER OUTLINE DRAWING