

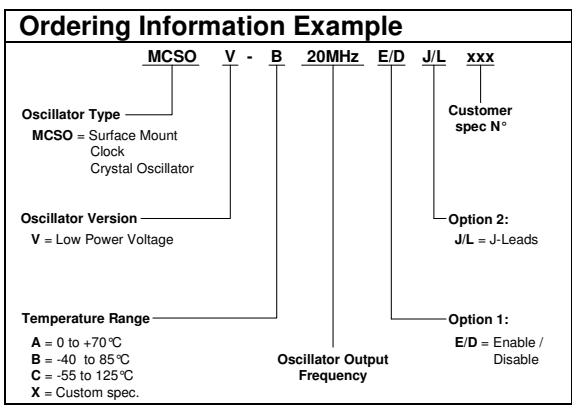
FREQUENCY STABILITY	
OVER:	
OPERATING TEMP. RANGE:	See note 1
OVERALL STABILITY:	$< \pm 100\text{ppm}^*$
INCLUDING:	
<ul style="list-style-type: none"> OVER OPERATING TEMPERATURE RANGE ADJUSTMENT @ 25°C LONG TERM AGING (10 YEARS) STABILITY OVER SUPPLY VOLTAGE $\pm 5\%$ STABILITY OVER LOAD (MIN. TO MAX.) 	
POWER SUPPLY	
SUPPLY VOLTAGE:	$V_{dd} = 3.3V \pm 5\%^*$
INPUT CURRENT:	$< 10\text{mA}^*$
OUTPUT	
OUTPUT SIGNAL:	HC-MOS compatible *
SYMMETRY:	40 / 60% (min.) @ $V_{dd} / 2^*$
RISE & FALL TIME:	$t_r < 7\text{ns}$ $t_f < 7\text{ns}^*$
LEVEL "0" & "1":	$< 0.4V$ $> V_{dd} - 0.5V$
START-UP TIME:	$< 5\text{ms}$
FAN OUT (LOAD):	10 TTL / LS *
ENVIRONMENT	
OPERABLE TEMP. RANGE:	-55 to +125°C
STORAGE TEMP. RANGE:	-65 to +125°C
VIBRATIONS:	10 to 2000Hz / 10g
SHOCKS:	5000g, 0.3ms, 1/2 sine
PACKAGE:	Ceramic
PACKAGE DIMENSIONS:	14.1 x 9.3 x 2.4mm (see packaging info)
PROCESSING:	Reflow soldering 260°C / 10s max. (see packaging info)
MISCELLANEOUS	
* Customer's specification on request	

Note 1: Operating Temperature Range	
MCSOV-A:	0 to +70 °C
MCSOV-B:	-40 to +85 °C
MCSOV-C:	-55 to +125 °C

Option 1: Enable / Disable (on request)	
See application circuit on page 2 for details	
Pin 1:	Pin 3 (Fout)::
Open	Clock
H	Clock
L	High Z
Not available for $f < 500\text{kHz}$	

Option 2: J / Leads (on request)
With tinned J / Leads pins Height: 3.8mm included J / Leads

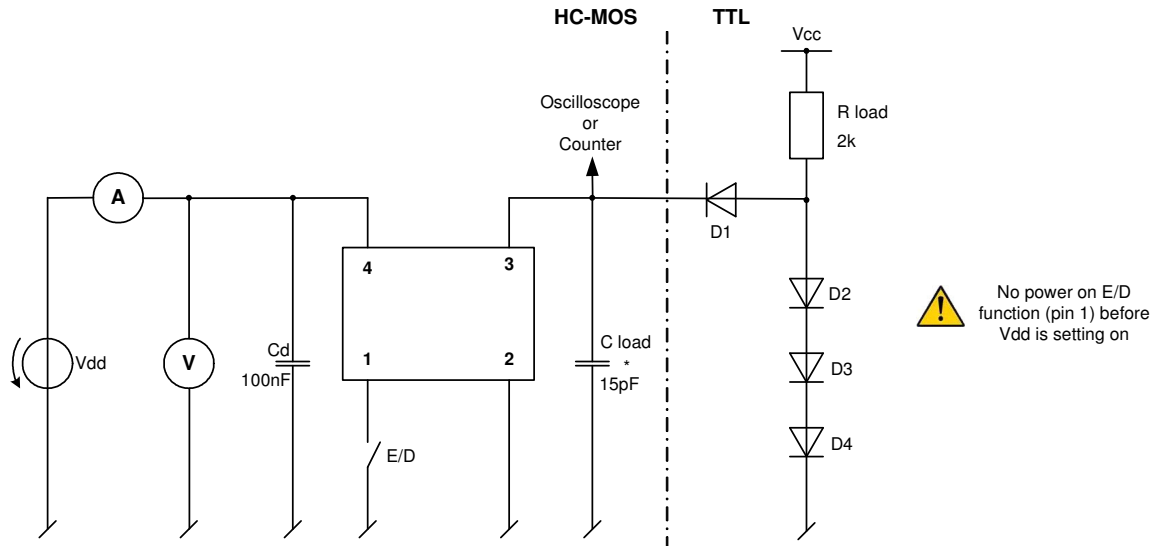
Marking Example			
Micro Crystal		Micro Crystal	
MCSOV-B	E/D	Type	Option 1
20.000 MHz	09.40	Frequency	Date Code
○		○ (PIN 1)	



STANDARD FREQUENCIES [MHz]					
10.0000	10.1500	10.2300	10.2400	11.0592	12.0000
12.2880	12.8000	13.0000	14.7456	16.0000	16.3840
18.4320	19.2000	19.6608	20.0000		& sub multiple

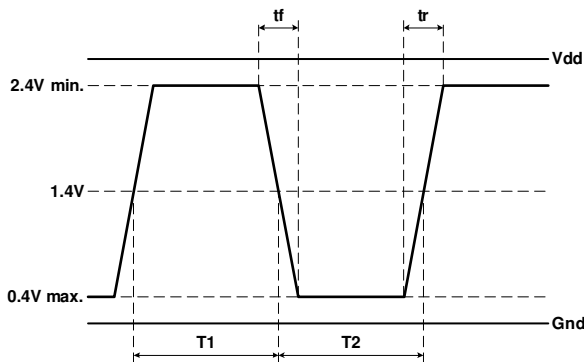
In accordance with our policy of continuous development and improvement,
 we reserve the right to modify the design or the specifications of our products without prior notice.

Application and Test Circuit:

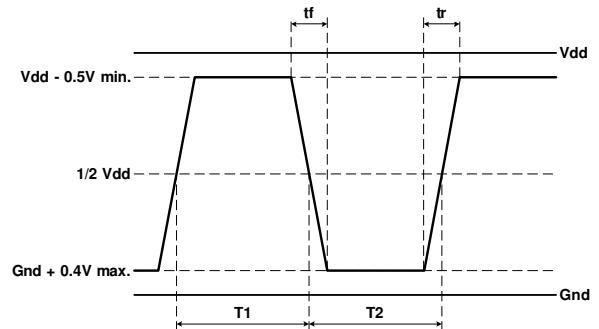


Waveform Output:

Waveshape TTL



Waveshape HC-MOS



$$Duty\ Cycle = 100 \times \frac{T1}{T1 + T2} [\%]$$

Date :	June 2003	Revision No. : 8	Revision Date : 10-09
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