

FREQUENCY STABILITY	
OVER:	
OPERATING TEMP. RANGE:	See note 1
OVERALL STABILITY:	$< \pm 300\text{ppm}^*$
INCLUDING:	
•	OVER OPERATING TEMPERATURE RANGE
•	ADJUSTMENT @ 25°C
•	AGING (24 HOURS @ 175°C)
•	STABILITY OVER SUPPLY VOLTAGE $\pm 10\%$
•	STABILITY OVER LOAD (MIN. TO MAX.)
POWER SUPPLY	
SUPPLY VOLTAGE:	$V_{dd} = 5V \pm 10\%$ or $3.3V (V)$
INPUT CURRENT:	$< 10\text{mA} (f < 20\text{MHz})^*$ $< 30\text{mA} (f > 20\text{MHz})^*$
OUTPUT	
OUTPUT SIGNAL:	HC-MOS compatible ($f < 20\text{MHz}$) * AC-MOS compatible ($f > 20\text{MHz}$) *
SYMMETRY:	40 / 60% (min.) @ $V_{dd} / 2^*$
RISE & FALL TIME:	$t_r < 7\text{ns}$ $t_f < 7\text{ns} (f < 20\text{MHz})^*$ $t_r < 7\text{ns}$ $t_f < 7\text{ns} (f > 20\text{MHz})^*$
LEVEL "0" & "1":	$< 0.4V$ $> V_{dd} - 0.5V$
START-UP TIME:	$< 5\text{ms}$
FAN OUT (LOAD):	25pF max^*
ENVIRONMENT	
OPERABLE TEMP. RANGE:	-55 to $+175^\circ\text{C}$ (during 72 hours)
STORAGE TEMP. RANGE:	-65 to $+125^\circ\text{C}$
VIBRATIONS:	10 to 2000Hz / 10g
SHOCKS:	5000g, 0.3ms, $\frac{1}{2}$ sine
PACKAGE:	Ceramic
PACKAGE DIMENSIONS:	$8.0 \times 3.7 \times 2.0\text{mm}$ (see packaging info)
PROCESSING:	Reflow soldering $260^\circ\text{C} / 10\text{s max.}$ (see packaging info)
MISCELLANEOUS	
* Customer's specification on request	

Note 1: Operating Temperature Range	
MCSO1E-D:	-55 to $+175^\circ\text{C}$

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 $f < 500\text{kHz}$	

Marking Example			
Micro Crystal		Micro Crystal	
MCSO1EV-D	E/D	Type	Option 1
33,000 MHz	09.12	Frequency	Date Code
O		O (PIN 1)	

Ordering Information Example			
MCSO1 EV - D 33MHz E/D xxx			
Oscillator Type	MCSO1 = Miniature Surface Mount Clock Crystal Oscillator	Customer spec N°	
Oscillator Version	E = Extensive Temp. range V = Low Power Voltage 3.3V	Option 1: E/D = Enable / Disable	
Temperature Range	D = -55 to $+175^\circ\text{C}$ X = Custom spec.	Oscillator Output Frequency	

Date :	October 2005	Revision No. :	3	Revision Date :	10-09
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Page 1 / 2

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.

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