

FREQUENCY STABILITY	
OVER:	
OPERATING TEMP. RANGE:	See note 1
OVERALL STABILITY:	$< \pm 100\text{ppm}^*$
INCLUDING:	
•	OVER OPERATING TEMPERATURE RANGE
•	ADJUSTMENT @ 25°C
•	LONG TERM AGING (10 YEARS)
•	STABILITY OVER SUPPLY VOLTAGE $\pm 10\%$
•	STABILITY OVER LOAD (MIN. TO MAX.)
POWER SUPPLY	
SUPPLY VOLTAGE:	$V_{dd} = 5V \pm 10\%^*$
INPUT CURRENT:	$< 15\text{mA}^*$
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	
MCSO-A:	0 to +70 °C
MCSO-B:	-40 to +85 °C
MCSO-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	
MCSO-B	E/D	Type	Option 1
20,000 MHz	09,42	Frequency	Date Code
O		O (PIN 1)	

Ordering Information Example			
MCSO - B 20MHz E/D J/L xxx			
Oscillator Type	MCSO = Surface Mount Clock Crystal Oscillator	Oscillator Output Frequency	Customer spec N°
Oscillator Version			Option 2: J/L = J-Leads
Temperature Range	A = 0 to +70°C B = -40 to 85°C C = -55 to 125°C X = Custom spec.		Option 1: E/D = Enable / Disable

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

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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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