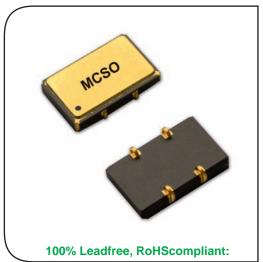


family package 14×9 mm From 10 kHz up to 225 MHz



Package: Recommended Solder Pad: Bottom view 4 3 9.3 5,6 N pin 1 E/D 14.1 pin 2 GND pin 3 Fout pin 4 Vdd 5.1 All dimensions in mm (max)

This SMD oscillator in ceramic package has been specially designed for

surface mount using infrared, vapor phase or epoxy techniques.

SMT Clock oscillator in ceramic package

High shock and vibration resistance Wide temperature range Low aging **Ultra low MSL** Very fast start-up

Fundamental quartz mode frequency

Customer specification on request

APPLICATIONS:

DESCRIPTION:

DIMENSIONS

- Avionics
- Airbone equipments
- Remote control
- Security application
- Radio Transceiver
- Microprocessor clocks

The MCSO's are supplied on trays (50 pcs / tray) For pick-and-place equipment, the parts are available in 24mm tapes with 250 parts min 500 parts max

ELECTRICAL CHARACTERISTICS AT +25°C

Swiss made quality

	1	<u> </u>	
Frequency stability Over temperature range (see ordering info) Including:adjustment at +25°C long term aging 10 years over supply voltage ±5% over load min to max	ΔF/F	≤±100	ppm
Frequency stability version T Over temperature range (see ordering info) Including:adjustment at +25°C long term aging 1 year over supply voltage ±5% over load min to max	ΔF/F	≤ ± 50	ppm
Supply voltage ± 10% 1)*	Vdd	2.5 / 3.3 / 5	V
Input current	ldd	see table 1	
Output signal		HC-MOS compatible	
Symmetry at Vdd/2		40 / 60	%
Rise & fall time ≤ 20MHz (load 15pf 20% to 80%)		≤7	ns
Rise & fall time ≥ 20MHz (load 15pf 10% to 90%)		≤3	ns
Level "0" & "1"		<0.4>Vdd-0.5	V
Start-up time (typ/max)	t	1/5	ms
Load min / max		3/47	pF

^{* 1)} C = 47nF ceramic must be connected between GND & Vdd

TABLE 1: Idd (Without load)

Frequency	F=< 10MHz	≤ 20MHz	>20 to 225MHz
W = Vdd = 2.5V	< 2mA	< 3mA	< 25mA
V = Vdd = 3.3V	< 4mA	< 5mA	< 30mA
blank = Vdd = 5V	< 6mA	< 7mA	< 40mA

STANDARD FREQUENCIES:

Frequency «MHz»						
3.6864	4	8	10	12	12.8	14.7456
16	20	24	40	48	120	160
Other frequencies from 10 kHz up to 225 MHz on request						

ENVIRONMENTAL CHARACTERISTICS:

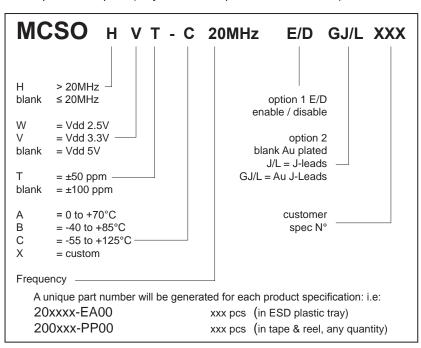
Storage temp. range	-65 to +125°C
Vibration resistance	10 to 2000Hz / 20g
Shocks resistance	5000g / 0.3ms / ½ sine

TERMINATIONS AND PROCESSING:

Reflow soldering	260°C / 10s max
Package	Ceramic 14 x 9 x 2.4mm
Lids	Kovar
Terminations option 2 on request	GJ/L: with Au terminations J/L J/L: with tinned Ag/Cu/Zn J/Leads pins Height 3.8mm included J/Leads
E/D option 1 on request Reaction time < 1µs	$\begin{array}{ccc} \text{Pin 1 open} \rightarrow \text{Pin 3} & \text{Clock} \\ & \text{H} & \rightarrow & \text{Clock} \\ & \text{L} & \rightarrow & \text{Low} \end{array}$

- No power E/D function (pin 1) before Vdd is setting on
- E/D option not available for F < 500 kHz
- E/D option on request (very low consumption in disable mode).

PRODUCT DESCRIPTION AND ORDERING INFORMATION:



All specifications subject to change without notice.









