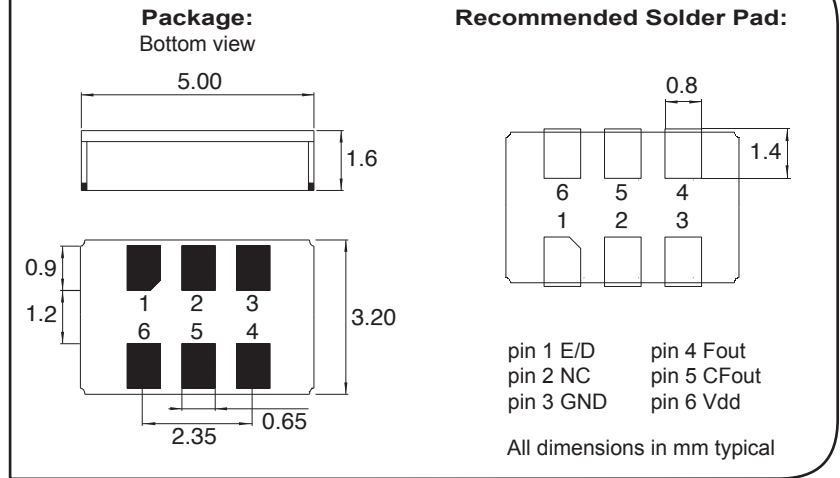




DIMENSIONS



SMT LVDS Clock oscillator in ceramic package
Fundamental quartz mode frequency
High shock and vibration resistance
Wide temperature range
Low aging
Ultra low internal MSL
Very fast start-up
Excellent solderability
Swiss made quality
Customer specification on request

DESCRIPTION:

This SMD oscillator in ceramic package has been specially designed for surface mount using infrared, vapor phase or epoxy techniques.

APPLICATIONS:

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

The MCSO2L's are supplied on trays (128 pcs / tray)
 For pick-and-place equipment, the parts are available in 12mm tapes
 with 250 parts min
 1000 parts min

ELECTRICAL CHARACTERISTICS AT +25°C

Frequency stability (standard) Over temperature range (see ordering info) Including: adjustment at 25°C long term aging 10 years over supply voltage ±5%	$\Delta F/F$	$\leq \pm 100$	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%	$\Delta F/F$	$\leq \pm 50$	ppm
Supply voltage ± 5%	1)*	Vdd	2.5 / 3.3 V
Input current		Idd	see table 1
Output signal (load 100 ohm)			LVDS
Symmetry (max)			45 / 55 %
Rise & fall time (20% to 80%)			<1 ns
Level Logic low (Typ/min)			1.1 / 0.9 V
Level Logic high (Typ/max)			1.4 / 1.6 V
Start-up time	t		<5 ms
Jitter RMS (1KHz to 1MHz)			<0.3 ps
Phase noise typical at 100MHz			
Static conditions	10Hz		-70 dBc/Hz
BW = 1Hz	100Hz		-100
	1 kHz		-125
	10 kHz		-145
	100kHz		-150

* 1) C = 47nF ceramic must be connected between GND & Vdd differential

TABLE 1: I_{dd}
(Without load)

Frequency	F= 40MHz	100MHz	130MHz
W =V _{dd} = 2.5V	< 5mA	< 10mA	< 20mA
V =V _{dd} = 3.3V	< 10mA	< 15mA	< 25mA

STANDARD FREQUENCIES:

Frequency «MHz»			
40	80	100	128
Other frequencies 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 (peak)	+260°C / 10s max
Package	Ceramic 5 x 3.2 x 1.6mm
Lids	Ceramic
Terminations option T3 on request	with tinned Ag/Cu/Zn
E/D option 1 on request Reaction time < 1µs	Pin 1 open → Pin 3 Clock H → Clock L → Low

- No power E/D function (pin 1) before V_{dd} is setting on

PRODUCT DESCRIPTION AND ORDERING INFORMATION:

MCSO2L V T - C 100MHz E/D T3 XXX

W = V _{dd} 2.5V	option 1 E/D enable / disable
V = V _{dd} 3.3V	option 2 blank Au plated
T = ±50ppm	T3 = tinned
Blank = ±100ppm	customer spec N°
A = 0 to 70°C	
B = -40 to 85°C	
C = -55 to 125°C	
X = custom	
Frequency	

A unique part number will be generated for each product specification

20xxxx-EA00 xxx pcs (in ESD plastic tray)

200xxx-ML00 xxx pcs (in tape & reel, any quantity)

All specifications subject to change without notice.

