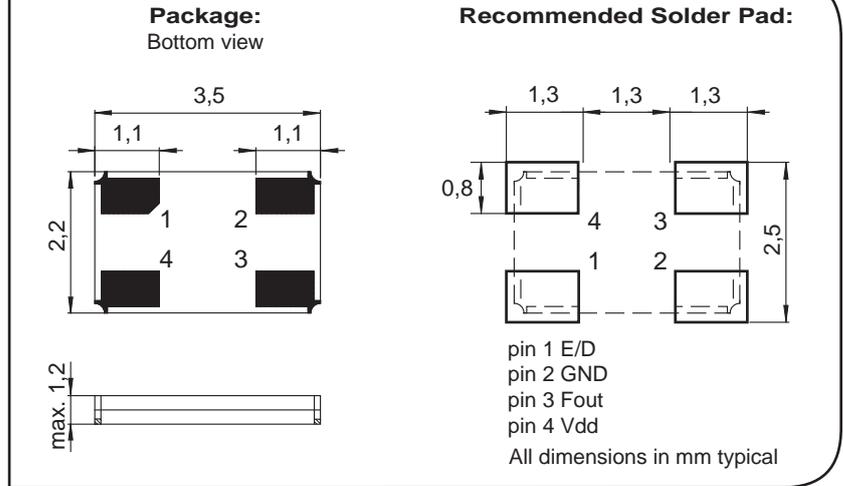




DIMENSIONS



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

The MCSO6's are supplied on trays (208 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 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	$\Delta F/F$	$\leq \pm 100$	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% over load min to max	$\Delta F/F$	$\leq \pm 50$	ppm
Supply voltage ± 5%	Vdd	2.5 / 3.3 / 5	V
Input current	Idd	see table 1	
Output signal		HC-MOS compatible	
Symmetry at Vdd/2		40 / 60	%
Rise & fall time For F=32.768 kHz rise & fall time ≤ 150ns (load 15pf 20% to 80%)		≤7	ns
Level "0" & "1"		<0.4>Vdd-0.5	V
Start-up time	t	<5	ms
Load min / max		3/47	pF

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

TABLE 1: I_{dd}
(Without load)

Frequency	F= 32 kHz	F=< 10MHz	≤ 20MHz	>20 to 155MHz
W =V _{dd} = 2.5V	< 300μA	< 2mA	< 3mA	< 25mA
V =V _{dd} = 3.3V	< 1mA	< 4mA	< 5mA	< 30mA
blank=V _{dd} = 5V	< 2mA	< 6mA	< 7mA	< 40mA

STANDARD FREQUENCIES:

Frequency «MHz»						
4	8	10	12	16	20	24
40	50	60				
Other frequencies from 10 kHz up to 155 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 3.5 x 2.2 x 1.2mm
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
- 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:

MCSO6 V T - C 20MHz E/D T3 XXX

W = V_{dd} 2.5V
V = V_{dd} 3.3V
blank = V_{dd} 5V

T = ±50ppm
blank = ±100ppm

A = 0 to +70°C
B = -40 to +85°C
C = -55 to +125°C
X = custom

Frequency

option 1 E/D enable / disable

option 2 blank Au plated T3 =tinned

customer spec N°

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.

