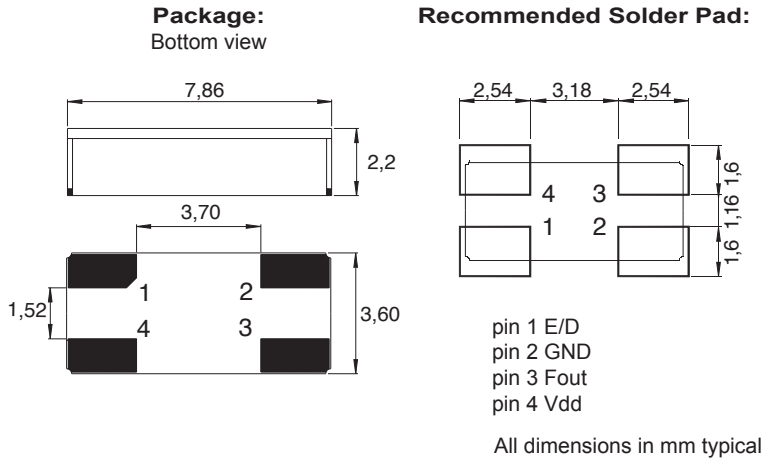




**DIMENSIONS**



SC cut quartz crystal  
SMT Clock oscillator in ceramic package  
Fundamental quartz mode frequency  
Ultra low stability  
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

Frequency stability included 1000h at Tmax

**ELECTRICAL CHARACTERISTICS AT +25°C**

**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
- Fire fighter equipments

The MCSO1's are supplied on trays (91 pcs / tray)  
For pick-and-place equipment, the parts are available in 16mm tapes with 250 parts min 1000 parts max

<b>Frequency stability</b> Over temperature range R = -10 to +150°C (see ordering info) Including 2)*	$\Delta F/F$	$\leq \pm 50$	ppm
<b>Frequency stability</b> Over temperature range S = -10 to +175°C (see ordering info) Including 2)*	$\Delta F/F$	$\leq \pm 100$	ppm
<b>Frequency stability</b> Over temperature range T = -10 to +210°C (see ordering info) Including 2)*	$\Delta F/F$	$\leq \pm 150$	ppm
Supply voltage $\pm 5\%$ 1)*	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 $\leq 30\text{MHz}$ For F=32.768 kHz rise & fall time $\leq 150\text{ns}$ (load 15pf 20% to 80%)		$\leq 7$	ns
Rise & fall time $\geq 30\text{MHz}$ for (load 15pf 10% to 90%)		$\leq 3$	ns
Level "0" & "1"		$<0.4>V_{dd}-0.5$	V
Start-up time	t	$<5$	ms
Load min / max		3/47	pF

\* 1) C = 47nF ceramic must be connected between GND & Vdd Operable over 2.3 to 5.5V

\* 2) adjustment at +25°C, long term aging 1000h at Tmax ordered over supply voltage  $\pm 5\%$  and over load min to max

