# CMOS OSCILLATOR

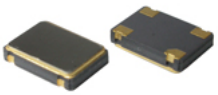
## Datasheet

## SX2C HCMOS SURFACE MOUNT CRYSTAL CLOCK OSCILLATOR

# FEATURES

- Ultra-miniature package
- High shock and vibrational resistivity
- Applications: Telecommunications, Portable electronics, …

2.5 x 2.0 x 0.9 mm



| Item | Specification | | | | |
|---|---|---|---|---|---|
| Frequency Range | 1.5 MHz ~ 133.0 MHz | | | | |
| Output Signal | CMOS | | | | |
| Overall Frequency Stability * | ± 20 ppm ~ ± 100 ppm (see options) | | | | |
| Operating Temperature Range | 0 ~ +70°C commercial application (see options)<br>-40 ~ +85°C industrial application (see options) | | | | |
| Supply Voltage Vdd | +1.8V ±5% | +2.5V ±5% | +2.8V ±5% | +3.0V ±5% | +3.3V ±5% |
| Supply Current Idd | 5 mA ~ 20 mA | 5 mA ~ 25 mA | 5 mA ~ 25 mA | 5 mA ~ 30 mA | 5 mA ~ 30 mA |
| Output Level | VOH ≥ 0.9 Vdd | | VOL ≤ 0.1 Vdd | | |
| Output Load | 15 pF (see options) | | | | |
| Symmetry | 45 / 55 % | | | | |
| Rise / Fall time Fr/Ff | 3 ~ 5 ns | | | | |
| Tri-state function | pin #1 = high or open<br>pin #1 = low | | | pin #3 = oscillation<br>pin #3 = high impedance | |
| Start-up Time | 10 ms max. | | | | |
| RMS Jitter ( 12 kHz to 20 MHz band ) | 1 ps max. | | | | |
| Packing Unit | 3000pcs / reel | | | | |
| Soldering Condition | 260°C , 10 sec x2 max | | | | |
| | **Customer specifications on request** | | | | |

(*) Includes initial tolerance @+25°C, stability over operating temperature, stability vs. load change, stability vs. supply change and one year aging

# OPTIONS & ORDERING INFORMATION

SX2C ..... ..... ..... ..... ..... - ..... MHz

| Supply Voltage | Operating Temp. * | Overall Stability * | Tri-state Function | Output Load * | Frequency in MHz |
|---|---|---|---|---|---|
| **18 =** +1.8V | **D =** -10° / +60°C | **20 =** ±20 ppm | **E =** Tri-state | **Blanc =** 15 pF | Please specify the frequency in MHz |
| **25 =** +2.5V | **E =** 0° / +70°C | **25 =** ±25 ppm | | **H =** 30 pF | |
| **28 =** +2.8V | **F =** -20° / +70°C | **30 =** ±30 ppm | | | |
| **30 =** +3.0V | **H =** -30° / +85°C | **50 =** ±50 ppm | | | |
| **33 =** +3.3V | **K =** -40° / +85°C | **100 =** ±100 ppm | | | |

(*) Note : Not all combinations are possible, please consult us.

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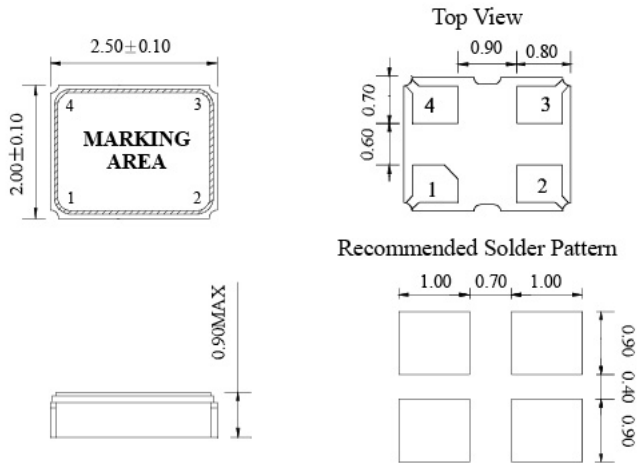
# OUTLINE DIMENSIONS




| | | | | |
|---|---|---|---|---|
| **Pin Connections** | **#1** : E/D | **#2** : GND | **#3**: Output | **#4** : Vcc |

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