HMI Frequency Technology | ECO European Crystal Organization Frequency Technology | KLOVE Frequency Technology

SX2CV

HCMOS SURFACE MOUNT VOLTAGE CONTROLLED CRYSTAL CLOCK OSCILLATOR

FEATURES

- Ultra-miniature package
- High shock and vibrational resistivity
- 4-pad and 6-pad versions
- Applications : Wireless communications , Digital TV-tuner , ...

2.5 x 2.0 x 0.9 mm

Item	Specification
Frequency Range	1.25 MHz ~ 50.0 MHz
Output Signal	CMOS
Overall Frequency Stability *	± 25 ppm ~ ± 100 ppm (see options)
Operating Temperature Range	0 ~ +70°C commercial application (see options) -40 ~ +85°C industrial application (see options)
Supply Voltage Vdd	+1.8V ±5% +2.5V ±5% +2.8V ±5% +3.3V ±5% +5.0V ±5%
Control voltage center	+0.9 V +1.25V +1.4V +1.65V +2.5V
Control voltage range	0.0V to 1.8V 0.25V to 2.25V 0.4V to 2.4V 0.3V to 3.0V 0.5V to 4.5V
Supply Current Idd	10 ~ 45 mA (Frequency dependent)
Output Level	VOH ≥ 0.9 Vdd VOL ≤ 0.1 Vdd
Output Load	15 pF
Symmetry	45 / 55 %
Rise / Fall time Fr/Ff	10 ns max (1.0 MHz ~9.99 MHz) 6 ns (10.0 Mhz ~54 MHz)
Start-up Time	10 ms max.
RMS Jitter (12 kHz to 20 MHz band)	1 ps max.
Phase noise	-130 dBc/Hz max. at 1 kHz offset
Tri-state function (only 6pad-version)	pin #2 = high or open pin #4 ==> oscillation pin #2 = low pin #4 ==> high impedance
Frequency Pulling Range	±80 ppm min. ; ±100 ppm min. ; ±150 ppm min. ; (See options)
Linearity	6% typical ; 10% max.
Slope Polarity	Positive (Increasing control voltage always increases output frequency)
Modulation bandwidth	10 kHz min (-3 dB)
Input impedance	1 MΩ min.
Packing Unit	3000pcs / reel
Soldering Condition	260°C , 10 sec x2 max

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

Customer specifications on request

OPTIONS & ORDERING INFORMATION

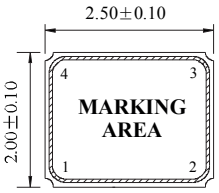
SX2CV .... - ..... MHz

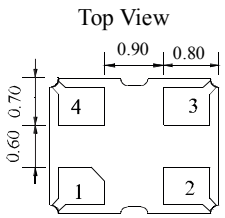
Supply Voltage	Operating Temp. *	Overall Stability *	Tri-state Function [2]	Package type	Pulling*	Frequency in MHz
18 = +1.8V	**D** = -10° / +60°C	**25** = ±25 ppm	**F** = No Tri-state	**4P** = 4-pad version	80 = ±80 ppm min.	Please specify the frequency in MHz
25 = +2.5V	**E** = 0° / +70°C	**30** = ±30 ppm	**E2** = Tri-state at pin #2	**6P** = 6-pad version	100 = ±100 ppm min.	
28 = +2.8V	**F** = -20° / +70°C	**50** = ±50 ppm			150 = ±150 ppm min.	
33 = +3.3V	**G** = -30° / +75°C	**100** = ±100 ppm				
50 = +5.0V	**H** = -30°/ +85°C					
	K = -40° +85°C					

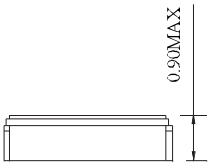
* Note : Not all combinations are possible , please consult us.

[2] Tri-state function only possible with 6-pad package

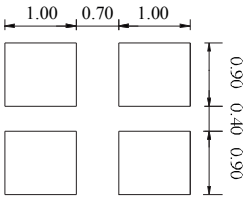
OUTLINE DIMENSIONS (MM)



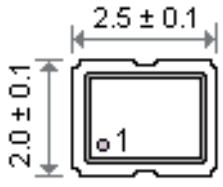


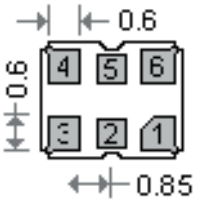


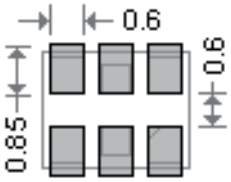
Recommended Solder Pattern



Pin Connections
#1 : Control voltage
#2 : GND
#3 :Vdd
#4 : Output







Pin Connections
#1 : Control voltage
#2 : E/D
#3 : GND
#4 : Output
#5 : NC
#6 :Vdd