

# SX5SS

# LOW EMI SPREAD SPECTRUM CLOCK OSCILLATORS

## FEATURES

- Reduce EMI by >15 dBc without changing your board layout.
- Drop-in replacement.
- Wide frequency range.
- Applications: GPS, Wireless LAN, Mobile phone, SDCs,...

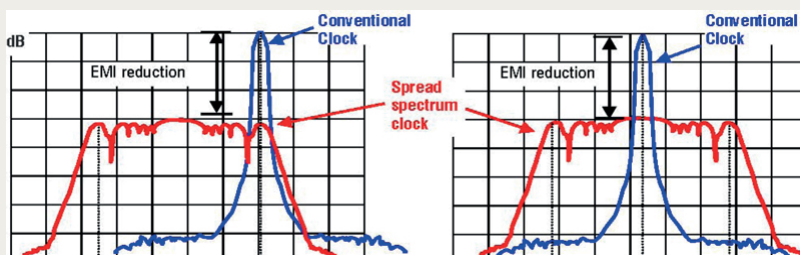
5.0 x 3.2 x 1.3 mm



Item	Specification
Frequency Range	6.0 MHz ~ 200.0 MHz
Spread Type ( see options )	Total % <b>Down Spread ( D )</b> <b>Center Spread ( C )</b>
Spread Percentage ( see options )	1% -1% ±0.5%
	3% -3% ±1.5%
EMI Reduction (Reduction is applied to the entire spectrum)	-9 dBc min. 100 MHz at Center Spread 0.5% -15 dBc min. 100 MHz at Center Spread 1.5% With respect to the dB level when no modulation.
Modulation Carrier Frequency (Dither rate)	6.9 kHz min. ; 55.5 kHz max. Frequency dependent
Output Logic	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	+3.3V ±5%
Supply Current Idd	7 mA ~ 20 mA
Output Level	VOH ≥ 0.9 Vdd VOL ≤ 0.1 Vdd
Output Load	15 pF
Symmetry	45 / 55 %
Rise Time / Fall Time Fr/Ff	4 ns max.
Tri-state function	pin #1 = high or open pin #3 = oscillation pin #1 = low pin #3 = high impedance
Start-up Time	10 ms max.
Cycle-to-cycle jitter	±250 ps typical ; ±300 ps max.
Packing Unit	1000pcs / reel
Soldering Condition	260°C , 10 sec x2 max
	<b>Customer specifications on request</b>

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

## MODULATION TYPES

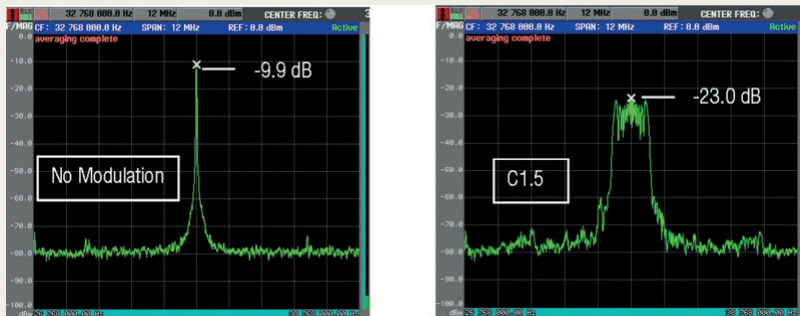


## OPTIONS & ORDERING INFORMATION

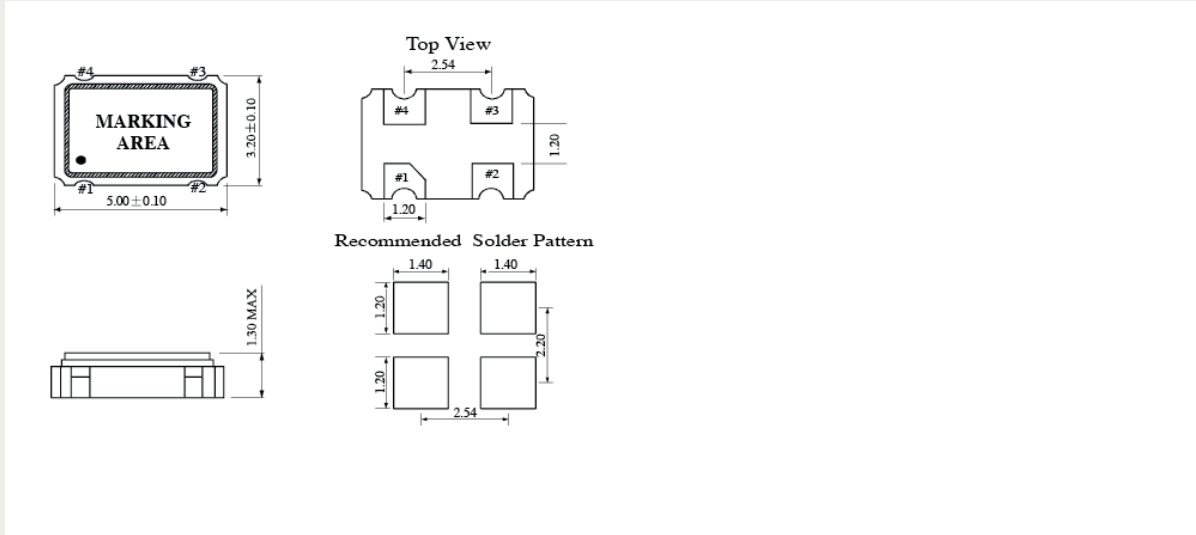
Supply Voltage	Operating Temp.	Overall Stability	Tri-state Function	Spread Type	Frequency in MHz
<b>33</b> = +3.3V	<b>E</b> = 0° / +70°C <b>K</b> = -40° / +85°C	<b>25</b> = ±25 ppm <b>50</b> = ±50 ppm <b>100</b> = ±100 ppm	<b>E</b> = Tri-state	<b>D1</b> = Down Spread 1% <b>D3</b> = Down Spread 3% <b>C0.5</b> = Center Spread 1% <b>C1.5</b> = Center Spread 3%	Please specify the frequency in MHz

If over-clocking is a problem to your system, please choose down spread

Example: 32.768 MHz at No Modulation and at Center Spread 1.5 % : 13.1 dBc EMI reduction



# OUTLINE DIMENSIONS



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