SX5SS

LOW EMI SPREAD SPECTRUM CLOCK OSCILLATORS

FEATURES

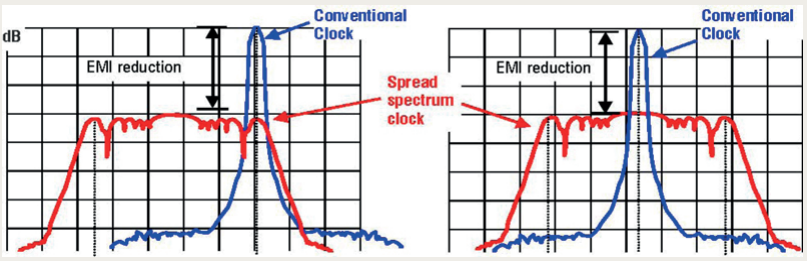
- Reduce EMI by >15 dBc without changing your board layout.
- Drop-in replacement.
- Wide frequency range.
- Applications: GPS, Wireless LAN, Mobile phone, SDCs,…

5.0 x 3.2 x 1.3 mm

Item	Specification		
Frequency Range	6.0 MHz ~ 200.0 MHz		
Spread Type (see options)	Total %	**Down Spread (D)**	**Center Spread (C)**
Spread Percentage (see options)	1% 3%	-1% -3%	±0.5% ±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	+1.8V ±10%	+2.5V ±10%	+3.3V ±10%
Supply Current Idd	7 mA ~ 35 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 #1 = low	pin #3 = oscillation pin #3 = high impedance	
Start-up Time	10 ms max.		
Packing Unit	1000pcs / 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

MODULATION TYPES



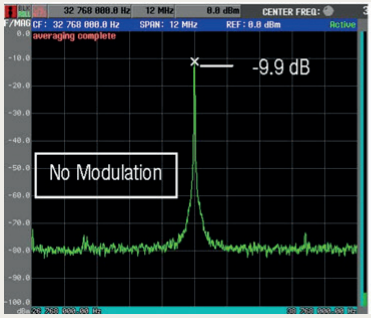
OPTIONS & ORDERING INFORMATION

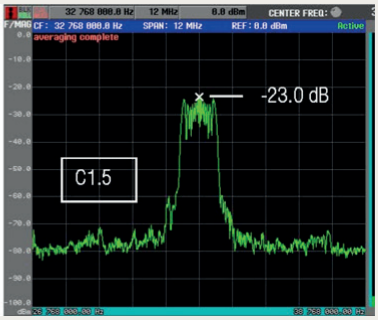
SX5SS .... - ..... MHz

Supply Voltage	Operating Temp.	Overall Stability	Tri-state Function	Spread Type	Frequency in MHz
18 = +1.8V **25 =** +2.5V **33 =** +3.3V	**E =** 0° / +70°C **K =** -40° / +85°C	**25 =** ±25 ppm **50 =** ±50 ppm **100 =** ±100 ppm	**E =** Tri-state	**D1 =** Down Spread 1% **D3 =** Down Spread 3% **C0.5 =** Center Spread 1% **C1.5 =** Center Spread 3%	Please specify the frequency in MHz

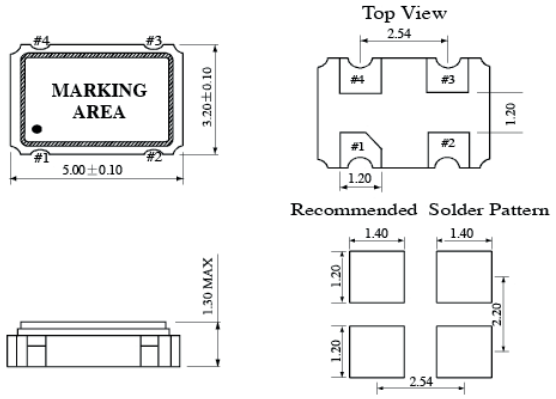
If over-clocking is a problem to your system, please choose down spread

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