

(Former FSS53S Series)

Features

- EMI Reduction
- Temperature Ranges to -40°C to +85°C
- Supply Voltage: 3.3V

ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range (F ₀)	1 ~ 200MHz
Operating Temperature Range	-40°C ~ +85°C
Storage Temperature Range (T _{STG})	-55 ~ +125°C
Supply Voltage (V _{DD})	3.3V±10%
Frequency Stability ²	±50PPM (Standard)
Input Current (I _{DD})	
1 ~ <50MHz	20 mA
50 ~ <80MHz	25 mA
80 ~ <100MHz	30 mA
100 ~ 200MHz	40 mA
Standby Input Current	10 µA
Output Symmetry (50% V _{DD} level)	40% ~ 60%
Rise/Fall Time (10%/90% V _{DD} Levels) (T _R /T _F)	
13 ~ <50MHz	10 nS
50 ~ <80MHz	8 nS
80 ~ <100MHz	5 nS
100 ~ 160MHz	4 nS
>160 ~ 200MHz	3 nS
Output Voltage (V _{OL})	10% V _{DD}
(V _{OH})	90% V _{DD} Min
Spread Spectrum Function	
Center Spread	±0.125% ~ ±2%
Down Spread	-0.5% ~ 4%
Modulation Frequency	30 ~ 40kHz
Output Load (HCMOS)	15 pF
Start-up Time (T _s)	10 mS
Output Disable Time ¹	100 mS
Output Enable Time ¹	10 mS

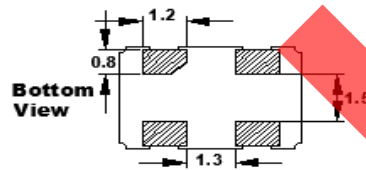
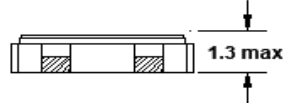
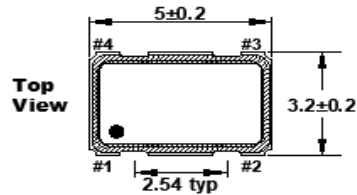
ENABLE / DISABLE FUNCTION	
Pin ¹	Output (pin 3)
OPEN ¹	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

Available Options by Stability & Operating Temp		
Frequency Stability ²	Operating Temperature (°C)	Frequency Range (MHz)
±50PPM	-40 ~ +85	1 ~ 200.000
±25PPM	0 ~ +70	1 ~ 200.000
±25PPM	-40 ~ +85	1 ~ 200.000

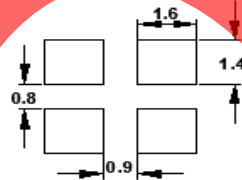
¹ An internal pull-up resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

² Inclusive of 25°C tolerance, operating temperature range.

DIMENSIONS / MECHANICAL SPECIFICATIONS



Recommended Solder Pad Layout



Dimensions in millimeters

Pin Connections

#1 E/D #3 Output
#2 GND #4 VDD

Note:

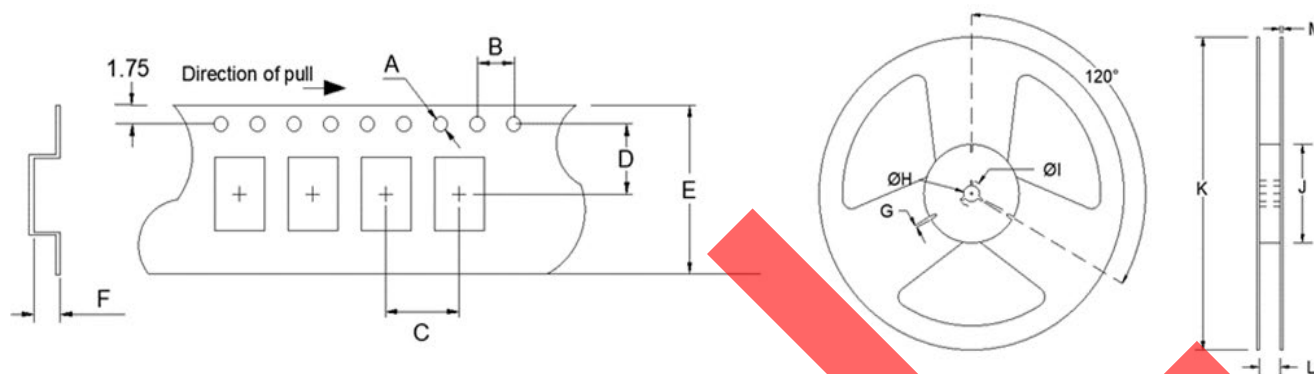
*A 0.01μF capacitor should be placed between V_{DD} (Pin 4) and GND (Pin 2) to minimize power supply line noise.

*Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellation's, reference pin shape, etc. may vary.

STANDARD SPECIFICATIONS

PARAMETERS	MAX (Unless otherwise noted)
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au (0.3~1μm) over Ni (1.27~8.89μm)
Seal Method	Seam
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
A	B	C	D	E	F	REEL QTY	G	H	I	J	K	L	M
ø1.5	4.0	8.0	5.5	12.0	1.5	-T1 = 1,000	2.0	ø13	ø21	ø62	ø180	13.5	2.0



Available Options & Part Identification for Spread Spectrum SMD Oscillator S5SC*

Sample PN: **FS5SCBM25.0-T1**

F	S5S	C	B		M	25.0	-T1
<u>Fox</u>	<u>Model Number</u>	<u>Voltage</u> C = 3.3V±10%	<u>Center Spread</u> N = ±0.125% A = ±0.25% B = ±0.5% C = ±0.75% D = ±1% E = ±1.5% F = ±2%	<u>Down Spread</u> P = -0.25% G = -0.5% H = -1% J = -1.5% K = -2% L = -3% M = -4%	<u>Operating Temperature</u> C = 0 to +70°C M = -40 to +85°C	<u>Frequency (MHz)</u>	<u>Values Added Options</u> Blank = Bulk T1 = 1,000 pcs

* Not all frequencies in the frequency range available.

Reliability Test Conditions

Please contact Abracon Quality Assurance department