

(Former FSS53B Series)

5mm x 3.2mm
Spread Spectrum SMD Oscillator



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 _O)	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
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	2 mS

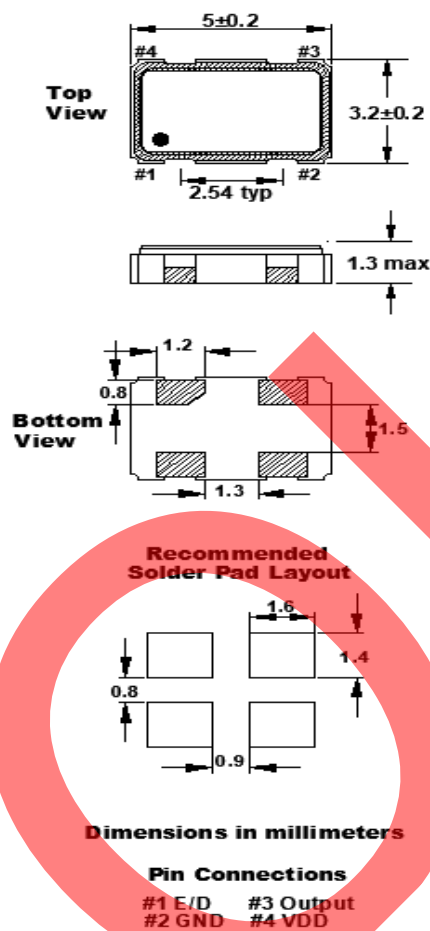
ENABLE / DISABLE FUNCTION	
Pin ¹	Output (pin 3)
OPEN ¹	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

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



Note:

*A $0.01\mu\text{F}$ 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 castellations, 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 ($0.3 \sim 1\mu\text{m}$) over Ni ($1.27 \sim 8.89\mu\text{m}$)
Seal Method	Seam
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

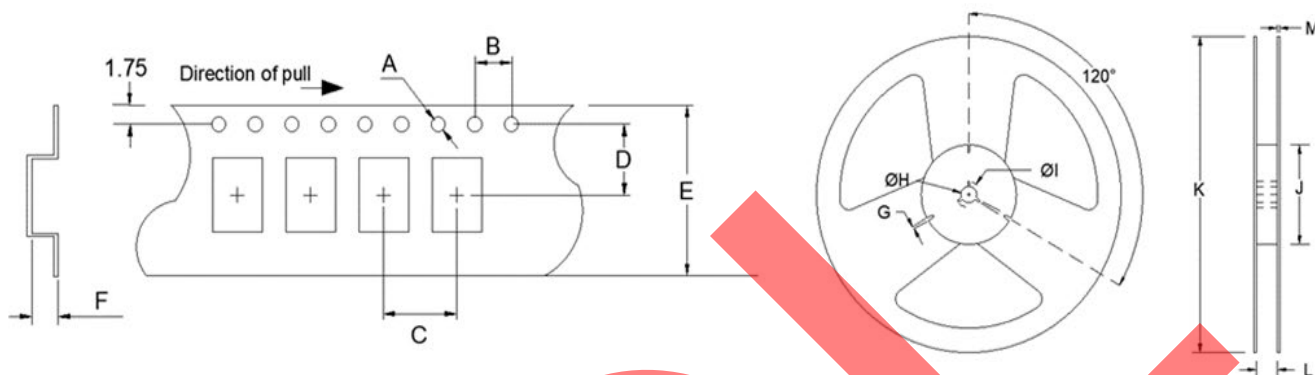
FS5BC

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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 FS5BC*

Sample PN: **FS5BCBM25.0-T1**

F	S5B	C	B		M	25.0	-T1
Fox	Model Number	Voltage C = 3.3V±5%	Center Spread N = ±0.125% A = ±0.25% B = ±0.5% C = ±0.75% D = ±1% E = ±1.5% F = ±2%	Down Spread P = -0.25% G = -0.5% H = -1% J = -1.5% K = -2% L = -3% M = -4%	Operating Temperature C = 0 to +70°C M = -40 to +85°C	Frequency (MHz)	Values Added Options Blank = Bulk T1 = 1,000 pcs

* Not all frequencies in the frequency range available.

Reliability Test Conditions

Please contact Abracon Quality Assurance department