

# Spread Spectrum HCMOS 5x3.2mm 2.5V SMD Oscillator



Model: FSS52 Series

RoHS Compliant / Pb Free

Rev. 12/9/2008

Page 1 of 3

[http://www.foxonline.com/need\\_a\\_sample.htm](http://www.foxonline.com/need_a_sample.htm)



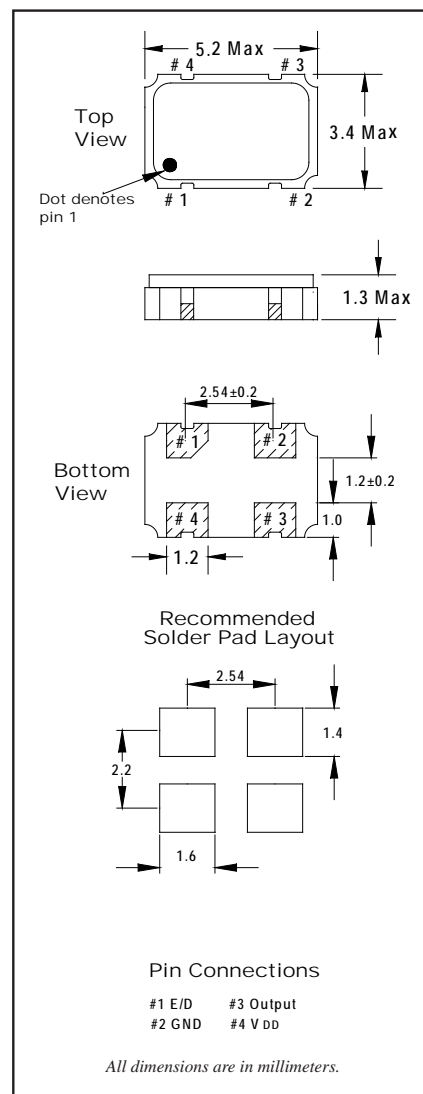
Fox Electronics Spread Spectrum Oscillators use industry-leading, proven, analog technologies which allows them to be used in a wide range of high-performance applications. These products offer various down-spread and center-spread options, enabling the customer to optimize the EMI reduction for their application requirements.

## • ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	13.000 ~ 160.000 MHz
Storage Temperature Range (TSTG)	-55°C ~ +125°C
Frequency Stability (demodulated frequency)	±100 PPM <sup>1</sup>
Supply Voltage (VDD)	2.5V ± 5%
Input Current (IDD)	
13.000000 ~ 79.999999 MHz	20mA
80.000000 ~ 99.999999 MHz	25mA
100.000000 ~ 160.000000 MHz	30mA
Rise Time (10% ~ 90% VDD) (TR)	
13.000000 ~ 49.999999 MHz	5nS
50.000000 ~ 79.999999 MHz	4nS
80.000000 ~ 160.000000 MHz	3nS
Fall Time (90% ~ 10% VDD) (TF)	
13.000000 ~ 49.999999 MHz	5nS
50.000000 ~ 79.999999 MHz	4nS
80.000000 ~ 160.000000 MHz	3nS
Output Symmetry (50% VDD)	40% ~ 60%
Output Voltage (HCMOS)	
Output Low (VOL)	10% VDD
Output High (VOH)	90% VDD Min
Output Current (IOL)	8mA Min
(IOH)	-8mA Min
Output Load	15pF
Standby Current (FSS53S)	10µA
Startup Time	10mS
Disable Time	100nS
Enable Time	
FSS52B (Tristate)	2mS
FSS52S (Standby)	10mS
Spread Spectrum Function (See Model Selection Guide, Page 2)	
Center Spread	±0.25% ~ ±2.0%
Down Spread	-0.5% ~ -4.0%
Aging	±3 PPM/Year
Maximum Soldering Temp / Time	260°C / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au

<sup>1</sup> Inclusive of initial frequency tolerance and operating temperature range.  
(Other stabilities to ±20 PPM available.)

<sup>2</sup> An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.  
Note: 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. The above specifications, having been carefully prepared and checked, are believed to be accurate at the time of publication; however, no responsibility is assumed by Fox Electronics for inaccuracies. All specifications subject to change without notice.



• ENABLE / DISABLE FUNCTION	
INH (Pin 1)	OUTPUT (Pin 3)
OPEN <sup>2</sup>	ACTIVE
'1' Level VIH ≥ 70% VDD	ACTIVE
'0' Level VIL ≤ 30% VDD	High Z

# Spread Spectrum HCMOS 5x3.2mm 2.5V SMD Oscillator



Model: FSS52 Series

RoHS Compliant / Pb Free

Rev. 12/9/2008

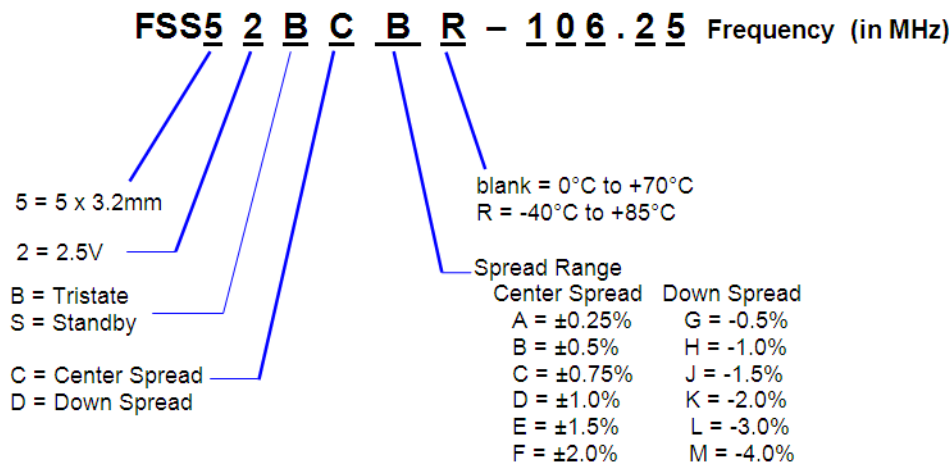
Page 2 of 3

[http://www.foxonline.com/need\\_a\\_sample.htm](http://www.foxonline.com/need_a_sample.htm)



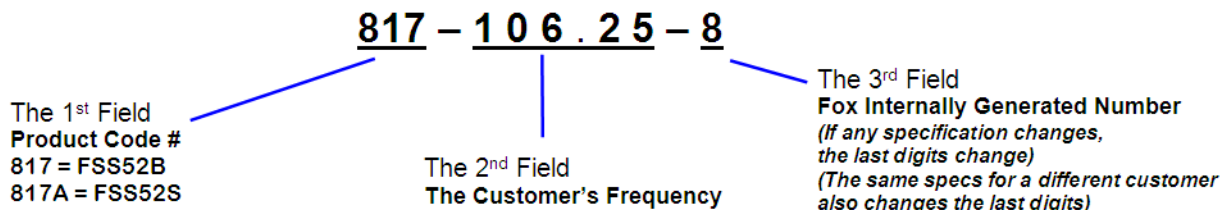
## Model Selection Guide & Fox Part Number

**STEP #1: Customer selects the Model Description and provides to Fox Customer Service Model Description**



**STEP #2: The Fox Customer Service team provides a customer specific Part Number for use on their Bill Of Materials (BOM).**

Fox Part Number (The assigned Fox Part Number must be on the BOM – not the above Model Description)  
 (This will ensure receipt of the proper part)



This example: **FSS52BCBR-106.25** = 5 x 3.2mm Package, 2.5V, Tristate, Center Spread, ±0.5% Modulation Rate, -40 to +85°C Temperature Range, at 106.25 MHz

# Spread Spectrum HCMOS 5x3.2mm 2.5V SMD Oscillator



Model: FSS52 Series

RoHS Compliant / Pb Free

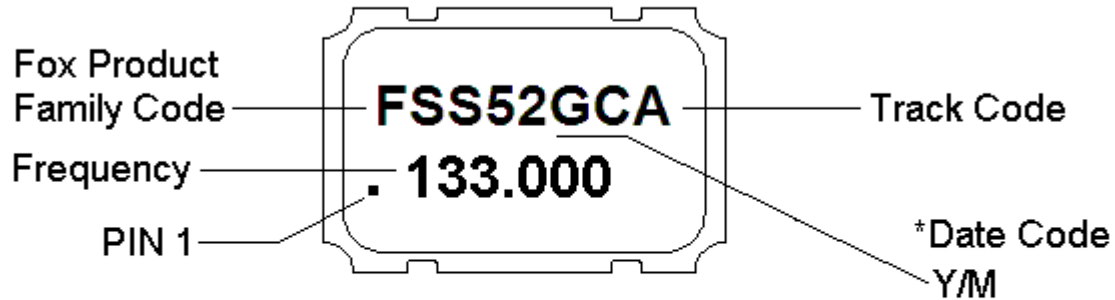
Rev. 12/9/2008

Page 3 of 3

[http://www.foxonline.com/need\\_a\\_sample.htm](http://www.foxonline.com/need_a_sample.htm)

Need a  
Sample®

## FSS52 Series Marking Identification



\* Year / Month Date Codes

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Code	A	B	C	D	E	F	G	H	J	K	L	M
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Code	A	B	C	D	E	F	G	H	J	K	L	M

### • TAPE SPECIFICATIONS (millimeters)

MODEL	A	B	C	D	E	F	STD Reel QTY
FSS52 Series	∅1.5	4.0	8.0	5.5	12.0	1.4	1,000

### • REEL SPECIFICATIONS (millimeters)

MODEL	G	H	I	J	K	L	M
FSS52 Series	2.0	∅13	∅21	∅62	∅180	12.2	1.6

