



7x5mm Spread Spectrum SMD Oscillator

S7SH

(former FSS72S Series)

DATASHEET

- EMI Reduction
- Temperature Ranges to -40°C to +85°C
- Supply Voltage: 2.5V

ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (F _o)	1 ~ 166MHz
Operating Temperature Range	-40 ~ +85°C
Storage Temperature Range (T _{STG})	-55 ~ +125°C
Supply Voltage (V _{DD})	2.5V±5%
Frequency Stability ²	±50PPM (Standard)
Input Current (I _{DD})	
1 ~ <50MHz	20mA
80 ~ <100MHz	25mA
100 ~ <166MHz	30mA
Standby Input Current	10μA
Output Symmetry (50% V _{DD} level)	40% ~ 60%
Rise/Fall Time (10%/90% V _{DD} Levels) (T _R /T _F)	
1 ~ <50MHz	5nS
50 ~ <80MHz	4nS
80 ~ 166MHz	3nS
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)	15pF
Start-up Time (T _S)	10mS
Output Disable Time ¹	100nS
Output Enable Time ¹	10mS

ENABLE / DISABLE FUNCTION

Pin1	Output (pin 3)
OPEN ¹	Active
'1' Level V _{IH} ≥ 70%V _{DD}	Active
'0' Level V _{IL} ≤ 30%V _{DD}	High Z

• Available Options by Stability & Operating Temp

Frequency Stability ²	Operating Temperature (°C)	Frequency Range (MHz)
±50PPM	-40 ~ +85	1 ~ 166.000
±25PPM	0 ~ +70	1 ~ 166.000
±25PPM	-40 ~ +85	1 ~ 166.000

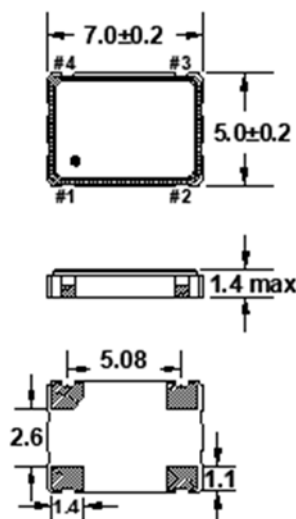
¹ An internal pull-up resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

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

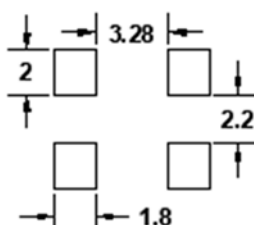




DIMENSIONS / MECHANICAL SPECIFICATIONS



Recommended Solder Pad Layout



Dimensions in mm

Pin Connections

#1 E/D #3 Output
#2 GND #4 V_{DD}

Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

Notes:

*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 castellations, reference pin shape, etc. may vary.





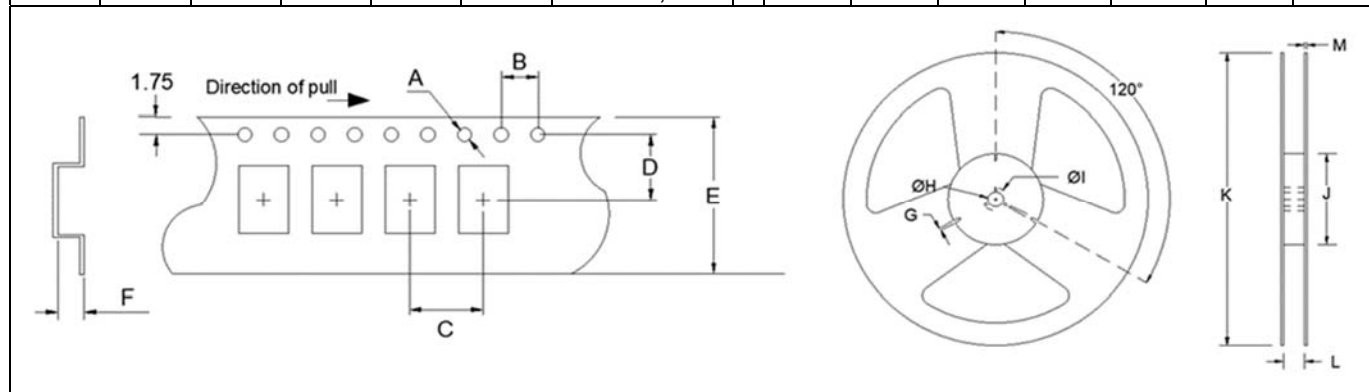
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Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty	G	H	I	J	K	L	M
Ø1.5	4.0	8.0	7.5	16.0	2.15	-T1 = 1,000 -T2 = 2,000	2.0	Ø13	Ø21	Ø80	Ø255	17.5	2.0



Available Options & Part Identification*

Example: **F S7S H B M 25.0**

F	S7S	H	B		M	25.0
Fox	Model Number	Voltage H = 2.5V±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

*Not all frequencies in the frequency range available.



Corporate Headquarters

5570 Enterprise Parkway
Fort Myers, FL 33905
<http://www.FOXONLINE.com>

Sales

1-888-GET-2-FOX (1-888-438-2369)
or
1-239-693-0099
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Part Number:		Cage: 61429
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