



# 3.2x2.5mm HCSL SMD Oscillator

O3SL  
(former F300SL Series)  
DATASHEET

Specifications	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range	13.5 ~ 160 MHz
Frequency Stability	(See options below)
Temperature Range	
Operating (T <sub>OPR</sub> )	(See options below)
Storage (T <sub>STG</sub> )	-55 ~ +125°C
Supply Voltage (V <sub>DD</sub> )	3.3V±5%
Input Current (I <sub>DD</sub> )	40 mA
Standby Current	10 µA
Output Symmetry (50% V <sub>OPP</sub> )	45% ~ 55%
Rise/Fall Time (20%/80% V <sub>PP</sub> Levels) (T <sub>R</sub> /T <sub>F</sub> )	
13.500 ~ 100.000 MHz	1.0 nS
100.000+ ~ 160.000 MHz	0.7 nS
Output Swing (V <sub>OPP</sub> )	0.65V Min
Output Voltage (V <sub>OL</sub> )	-0.15 ~ 0.15V
(V <sub>OH</sub> )	0.55 ~ 0.85V
Output Load	50 Ohms to GND
Start-up Time (T <sub>S</sub> )	10 mS
Output Disable Time <sup>1</sup>	200 nS
Output Enable Time <sup>1</sup>	10 mS
Aging (per year @ 25C)	±3 PPM
Phase Jitter (12kHz~20MHz)	1 pS

ENABLE / DISABLE FUNCTION <sup>1</sup>	
Pin1	Out 1 (pin 4), Out 2 (pin 5)
OPEN <sup>1</sup>	Active
'1' Level V <sub>IH</sub> ≥ 70%V <sub>DD</sub>	Active
'0' Level V <sub>IL</sub> ≤ 30%V <sub>DD</sub>	High Z

<sup>1</sup> An internal pull-up resistor from pin 1 to pin 6 allows active output if pin 1 is left open

• Available Options by Stability & Operating Temperature		
Frequency Stability	Operating Temperature (°C)	Frequency Range (MHz)
±100PPM <sup>2</sup>	-20 ~ +70	13.500 ~ 160.000
±100PPM <sup>2</sup>	-40 ~ +85	13.500 ~ 160.000
±50PPM <sup>2</sup>	-20 ~ +70	13.500 ~ 160.000
±50PPM <sup>2</sup>	-40 ~ +85	13.500 ~ 160.000
±25PPM <sup>2</sup>	-20 ~ +70	13.500 ~ 160.000
±25PPM <sup>3</sup>	-40 ~ +85	13.500 ~ 160.000

<sup>2</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, vibration, reflow, and one-year aging.

<sup>3</sup> Inclusive of 25C tolerance and operating temperature range

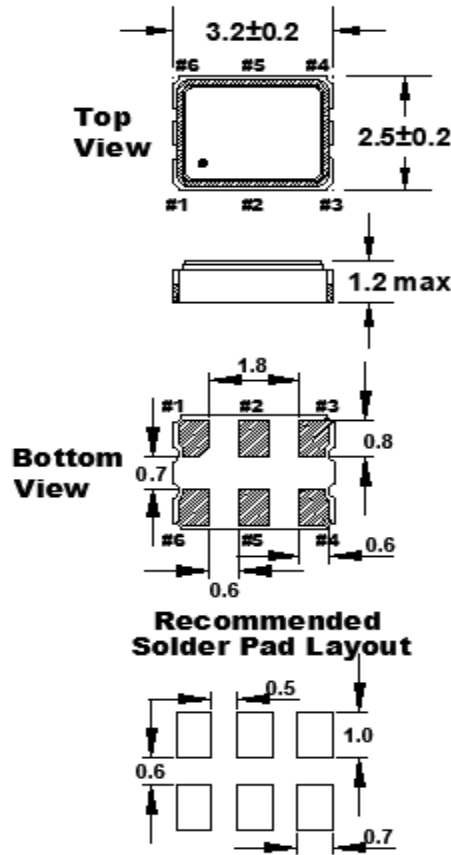
	<b>Title / Description:</b> O3SL SERIES STANDARD SPECIFICATIONS		
	<b>Drawing Number:</b> O3SL-DOC-1		<b>Size:</b> A
	<b>Part Number:</b>		<b>Cage:</b> 61429
	<b>Draftsperson:</b> BEC	<b>Approved:</b> MAJ	<b>Revision Date:</b> 10/23/2019

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Dimensions are in millimeters.

### Pin Connections

#1 E/D	#4 OutQ
#2 NC	#5 OutQN
#3 GND	#6 VDD

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<sub>DD</sub> (Pin 6) and GND (Pin3) 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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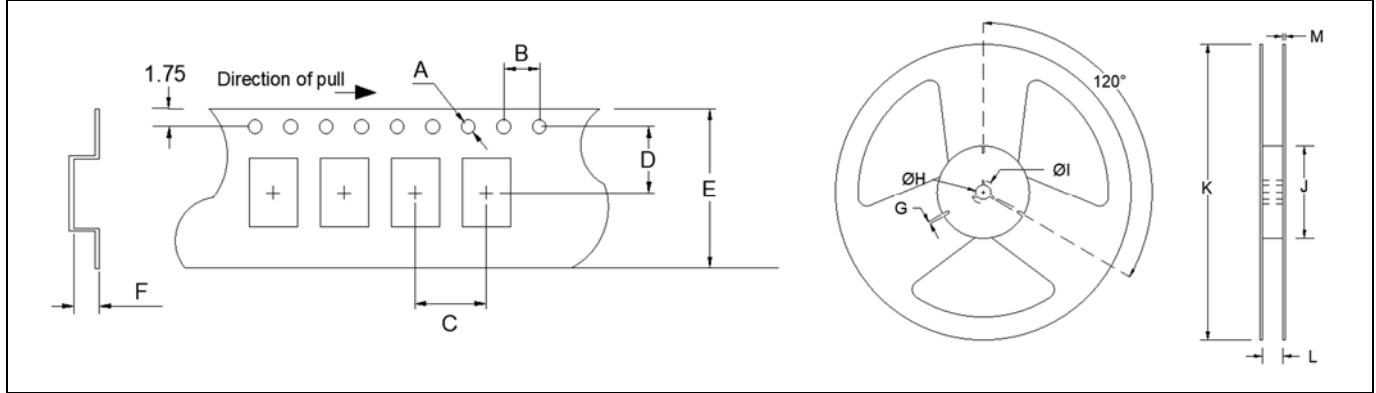
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Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Std Reel Qty	G	H	I	J	K	L	M
Ø1.5	4.0	4.0	3.5	8.0	1.4	-T1 = 1,000 -T2 = 2,000 -T3 = 3,000	2.0	Ø13	Ø21	Ø60	Ø180	9.0	1.2



## Available Options & Part Identification for O3SL\*

Example: F O3SL C D M 125.0

F	O3SL	C	D	M	125.0
Fox	Model Number	Voltage	Stability	Operating Temperature	Frequency (MHz)
		<b>B = 3.3V±5%</b>	A = ±100 PPM B = ±50 PPM D = ±25 PPM	E = -10 to +70°C M = -40 to +85°C	

\* Not all frequencies within the frequency range, or every combination of stability, temp range, and voltage available. See stabilities and op temps for each V<sub>DD</sub>.



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