



HCSL 5x3.2mm SMD Oscillator

O5SL
(former F530SL Series)
DATASHEET

- HCSL Differential Output
- Stabilities to ± 25 PPM
- Temperature Ranges as wide as -40°C to $+105^{\circ}\text{C}$
- Supply Voltage: 3.3V

3.3V ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (F_0)	13.500 ~ 160.000 MHz
Storage Temperature Range (T_{STG})	$-55 \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	$3.3\text{V} \pm 10\%$
Input Current (I_{DD})	40 mA
Standby Current	10 μA
Output Symmetry (50% V_{OPP})	45% ~ 55%
Rise/Fall Time (20%/80% V_{PP} Levels) (T_R/T_F)	
13.500 ~ 99.999999 MHz	1.0 nS
100.000 ~ 160.000 MHz	0.7 nS
Output Voltage (V_{OL})	$-0.15\text{V} \sim 0.15\text{V}$
(V_{OH})	$0.55\text{V} \sim 0.85\text{V}$
Output Swing (V_{OPP})	0.65V Min
Output Load	50 Ohms to GND
Start-up Time (T_S)	10 mS
Output Disable Time ¹	200 nS
Output Enable Time ¹	10 mS
Aging (per year @ 25°C)	± 3 PPM
Phase Jitter RMS (12 kHz ~ 20 MHz)	1 pS RMS

ENABLE / DISABLE FUNCTION ¹

Pin1	Out 1 (pin 4), Out 2 (pin 5)
OPEN ¹	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

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

• Available Options by Stability & Operating Temperature

Frequency Stability	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}^2$	$-20 \sim +70$	13.500 ~ 160.000
$\pm 100\text{PPM}^2$	$-40 \sim +85$	13.500 ~ 160.000
$\pm 100\text{PPM}^2$	$-40 \sim +105$	13.500 ~ 160.000
$\pm 50\text{PPM}^2$	$-20 \sim +70$	13.500 ~ 160.000
$\pm 50\text{PPM}^2$	$-40 \sim +85$	13.500 ~ 160.000
$\pm 50\text{PPM}^2$	$-40 \sim +105$	13.500 ~ 160.000
$\pm 25\text{PPM}^2$	$-20 \sim +70$	13.500 ~ 160.000
$\pm 25\text{PPM}^3$	$-40 \sim +85$	13.500 ~ 160.000

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

³ Inclusive of 25°C tolerance and operating temperature range



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Title / Description: O5SL SERIES STANDARD SPECIFICATIONS

Drawing Number: O5SL-DOC-1

Size: A

Part Number:

Cage: 61429

Draftsperson: BEC

Approved: MAJ

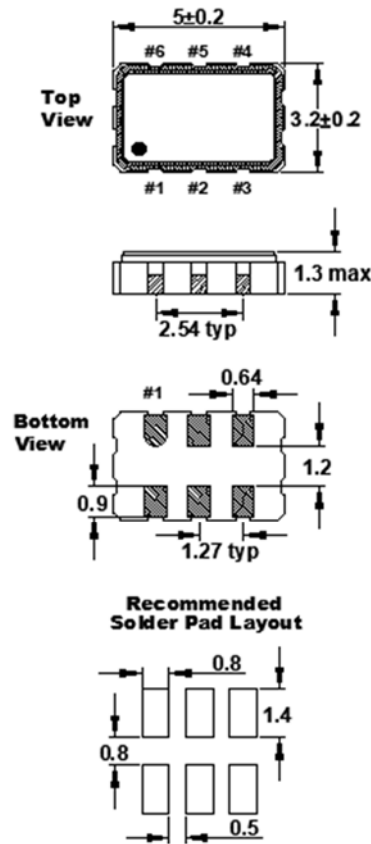
Revision Date: 6/7/2019



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DIMENSIONS / MECHANICAL SPECIFICATIONS



Dimensions in millimeters

Pin Connections

#6 VDD	#5 OutQN	#4 OutQ
#1 E/D	#2 N.C.	#3 Gnd

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 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

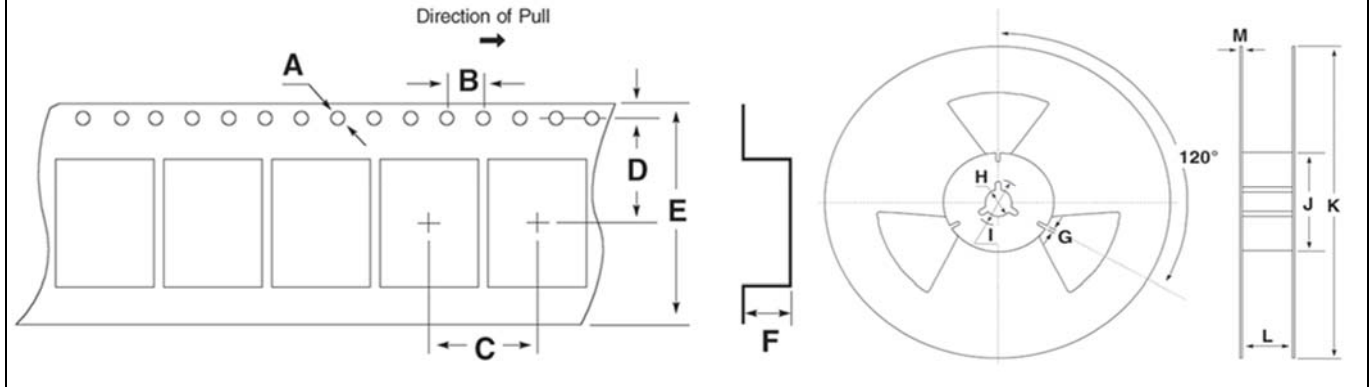
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Tape Specifications (millimeters)						Reel Specifications (millimeters)							
A	B	C	D	E	F	Reel Qty	G	H	I	J	K	L	M
Ø1.55	4.0	8.0	5.5	12.0	1.5	-T1 = 1,000	2.0	Ø13	Ø21	Ø62	Ø180	13.5	2.0



Available Options & Part Identification for O5SL*

Example: F O5SL C B F 125.0

F	O5SL	B	B	C	125.0
Fox	Model Number	Voltage	Stability	Operating Temperature	Frequency (MHz)
		C = 3.3V±10%	A = ±100 PPM B = ±50 PPM D = ±25 PPM	F = -20 to +70°C M = -40 to +85°C P = -40 to +105°C	

*Not all frequencies in the frequency range, or every combination of stability, temp range may be available.



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