



# 5x3.2mm LVPECL SMD Oscillator

O5PS  
(former F530P/F540P)  
DATASHEET

- LV-PECL
- Temperature Ranges to -40°C to +85°C
- Supply Voltages: 3.3V; 2.5V

## ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)	
Supply Voltage (V <sub>DD</sub> )	3.3V±5%	2.5V±5%
Frequency Range (F <sub>o</sub> )	13.5 ~ 325MHz	13.5 ~ 250MHz
Storage Temperature Range (T <sub>STG</sub> )	-55 ~ +125°C	
Input Current (I <sub>DD</sub> )	88mA	
Standby Current	30µA	
Output Symmetry (50% V <sub>p-p</sub> level)		
13.5 ~ 156.25MHz	45% ~ 55%	
>156.25MHz	40% ~ 60%	
Rise Time (20% ~80% V <sub>p-p</sub> Levels) (T <sub>R</sub> )	1nS	
Fall Time (80% ~ 20% V <sub>p-p</sub> Levels) (T <sub>F</sub> )	1nS	
Output Voltage (V <sub>OL</sub> )	1.68V	1.095V
(V <sub>OH</sub> )	2.275V Min	1.475V Min
Output Load	50 Ohms to V <sub>DD</sub> -2.0V	
Start-up Time (T <sub>S</sub> )	10mS	
Disable Time	200nS	
Enable Time	10mS	
Phase Jitter, RMS (12kHz to 20MHz BW)	1pS	

## ENABLE / DISABLE FUNCTION

Pin 1	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

Frequency Stability	Operating Temperature (°C)
±100PPM <sup>2</sup>	-20 ~ +70
±100PPM <sup>2</sup>	-40 ~ +85
±50PPM <sup>2</sup>	-20 ~ +70
±50PPM <sup>2</sup>	-40 ~ +85
±25PPM <sup>2</sup>	-20 ~ +70
±25PPM <sup>3</sup>	-40 ~ +85

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

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

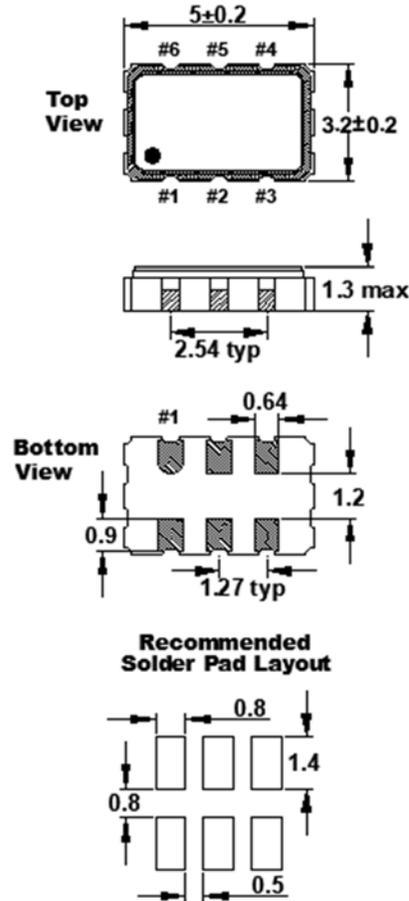
<sup>3</sup> Inclusive of 25°C tolerance, operating temperature range.



<b>Title / Description:</b> O5PS SERIES STANDARD SPECIFICATIONS	
<b>Drawing Number:</b> O5PS-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> 08/29/2019	



### 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 x2
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

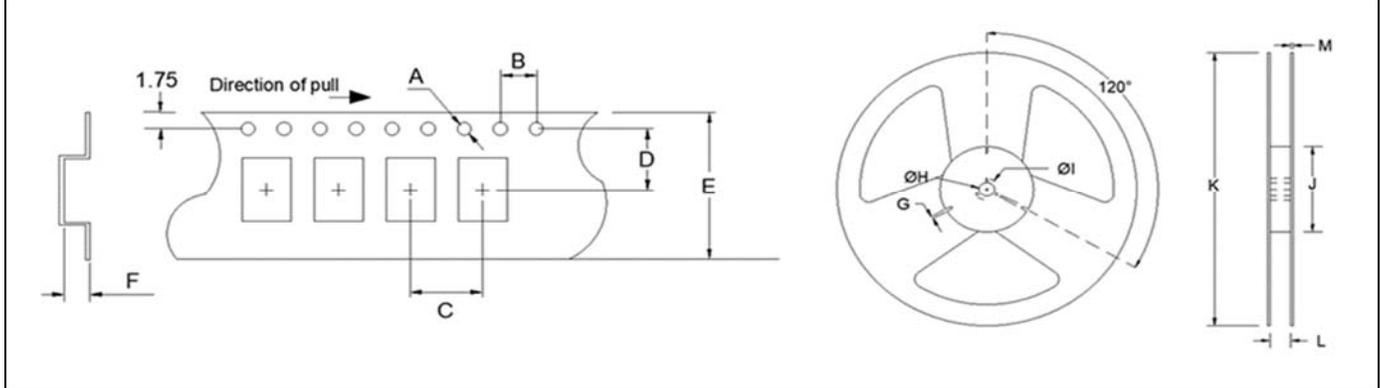
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Tape Specifications (millimeters)							Reel Specifications (millimeters)							
A	B	C	D	E	F	Reel Qty	G	H	I	J	K	L	M	
Ø1.55	4.0	8.0	5.5	16.0	1.4	-T1 = 1,000	2.0	Ø13	Ø21	Ø60	Ø180	13.0	2.0	



## Available Options & Part Identification\*

Example: **F O5PS C B M 125.0**

F	O5PS	B	B	M	125.0
<b>Fox</b>	<b>Model Number</b>	<b>Voltage</b> C = 3.3V±5% H = 2.5V±5%	<b>Stability</b> A = ±100 PPM B = ±50 PPM D = ±25 PPM	<b>Operating Temperature</b> F = -20 to +70°C M = -40 to +85°C	<b>Frequency</b>

\*Not all frequencies in 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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