



3.2x2.5mm SMD LVDS Oscillator

O3LS DATASHEET

- LVDS Output
- Stabilities to ± 20 PPM
- Operating Temperature Range to -40°C to $+85^{\circ}\text{C}$
- Supply Voltages: 2.5V, 3.3V

Specifications

PARAMETERS	MAX (unless otherwise noted)
Frequency Range	13.5 ~ 250MHz
Storage Temperature Range (T_{STG})	$-55 \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	2.5V $\pm 10\%$ 3.3V $\pm 10\%$
Input Current (I_{DD})	50mA
Standby Current	15 μA
Output Symmetry (50% $V_{\text{P-P}}$)	45% ~ 55%
Rise Time (20%~80% $V_{\text{P-P}}$)	500pS
Fall Time (80%~20% $V_{\text{P-P}}$)	500pS
Differential Output Voltage (V_{OD})	0.247V ~ 0.454V
Differential Offset Voltage (V_{OS})	1.125V ~ 1.375V
Output Load	100 Ohms Typical
Start-up Time (T_{S})	10mS
Output Disable Time ¹	200nS
Output Enable Time ¹	10mS
Aging (per year @ 25C)	± 3 PPM
Phase Jitter (12kHz~20MHz)	1pS

ENABLE / DISABLE FUNCTION

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

• Available Options by Stability & Operating Temp

Frequency Stability	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}^2$	$-20 \sim +70$	13.500 ~ 250.000
$\pm 100\text{PPM}^2$	$-40 \sim +85$	13.500 ~ 250.000
$\pm 50\text{PPM}^2$	$-20 \sim +70$	13.500 ~ 250.000
$\pm 50\text{PPM}^2$	$-40 \sim +85$	13.500 ~ 250.000
$\pm 25\text{PPM}^2$	$-20 \sim +70$	13.500 ~ 250.000
$\pm 25\text{PPM}^3$	$-40 \sim +85$	13.500 ~ 250.000
$\pm 20\text{PPM}^3$	$-20 \sim +70$	13.500 ~ 250.000

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

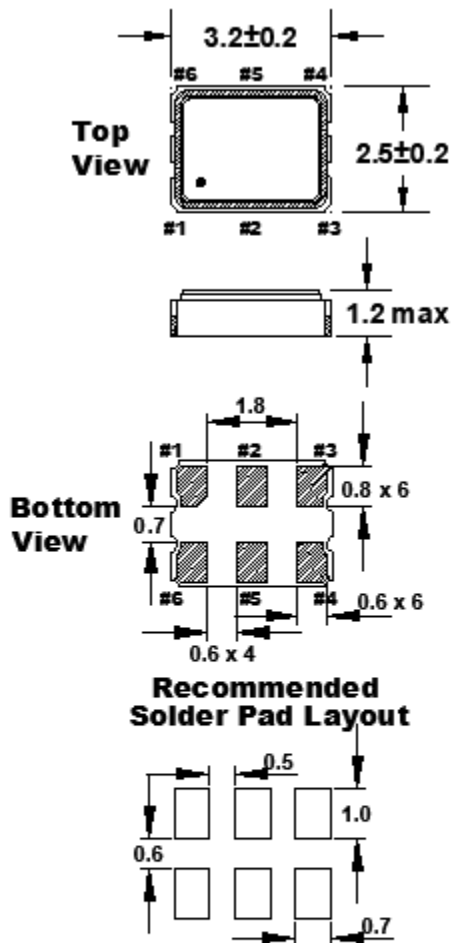
² Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, reflow, one-year aging, shock, and vibration.

³ Inclusive of 25°C tolerance, operating temperature range.





DIMENSIONS / MECHANICAL SPECIFICATIONS



Dimensions are in millimeters.

Pin Connections

#1 E/D	#4 Out
#2 NC	#5 Out
#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 $0.01\mu\text{F}$ 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.

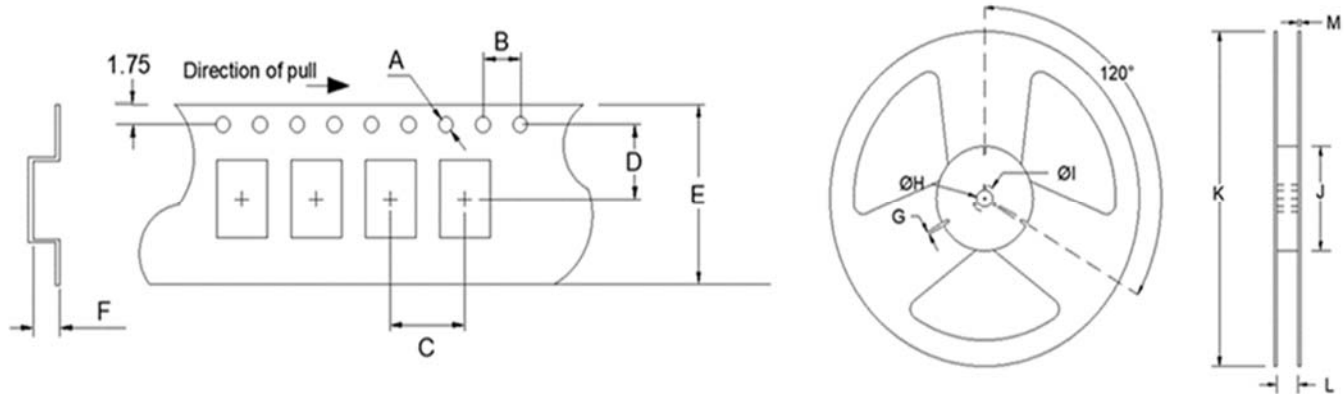




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Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty	G	H	I	J	K	L	M
Ø1.5	4.0	4.0	3.5	8.0	1.4	-T1 = 1,000 -T3 = 3,000	2.0	Ø13	Ø21	Ø60	Ø180	9.0	1.2



Available Options & Part Identification*

Example: **F O3LS C D M 125.0**

F	O3LS	C	D	M	125.0
Fox	Model Number	Voltage	Stability	Operating Temperature	Frequency(MHz)
		J = 2.5V±10% C = 3.3V±10%	A = ±100PPM B = ±50PPM D = ±25PPM E = ±20 PPM	F = -20 to +70°C M = -40 to +85°C	

*Not all frequencies in the frequency range, or every combination of stability, temp range, and voltage available.
See stabilities and op temps table on page 1.



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Title / Description: O3LS SERIES STANDARD SPECIFICATIONS

Drawing Number: O3LS-DOC-1

Size: A

Part Number:

Cage: 61429

Draftsperson: BEC

Approved: MAJ

Revision Date: 10/07/2019

Mouser Electronics

Authorized Distributor

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