



7x5mm LVDS Oscillator

O7LS
(former F4700, F4710 Series)
DATASHEET

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

Specifications

PARAMETERS	MAX (unless otherwise noted)	
Frequency Range	25.0 ~ 400.0 MHz	
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})	63 mA	
Standby Current	30 μA	
Output Symmetry (50% $V_{\text{P-P}}$)	45% ~ 55%	
Rise Time (20%~80% $V_{\text{P-P}}$)	0.5 nS	
Fall Time (80%~20% $V_{\text{P-P}}$)	0.5 nS	
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})	10 mS	
Output Disable Time ¹	200 nS	
Output Enable Time ¹	10 mS	
Aging (per year @ 25C)	± 3 PPM	
Phase Jitter (12kHz~20MHz)	1 pS	

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)
$\pm 100\text{PPM}^2$	$-10 \sim +70$	25.0 ~ 400.0
$\pm 100\text{PPM}^2$	$-40 \sim +85$	25.0 ~ 400.0
$\pm 100\text{PPM}^2$	$-40 \sim +105$	25.0 ~ 300.0
$\pm 50\text{PPM}^2$	$-10 \sim +70$	25.0 ~ 400.0
$\pm 50\text{PPM}^2$	$-40 \sim +85$	25.0 ~ 400.0
$\pm 50\text{PPM}^2$	$-40 \sim +105$	25.0 ~ 300.0
$\pm 25\text{PPM}^2$	$-10 \sim +70$	25.0 ~ 400.0
$\pm 25\text{PPM}^3$	$-40 \sim +85$	25.0 ~ 400.0
$\pm 20\text{PPM}^3$	$-10 \sim +70$	25.0 ~ 400.0

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.

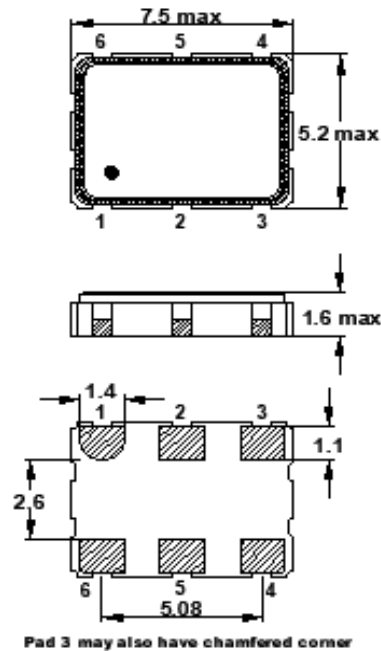


Title / Description: O7LS SERIES STANDARD SPECIFICATIONS		
Drawing Number: O7LS-DOC-1		Size: A
Part Number:		Cage: 61429
Draftsperson: BEC	Approved: MAJ	Revision Date: 05/05/2020

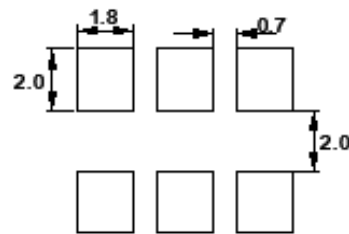


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Recommended Solder Pad Layout



Dimensions are in millimeters.

Pin Connections

#1 E/D #4 Output_1
#2 N.C. #5 Output_2
#3 GND #6 VDD

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 0.01 μ 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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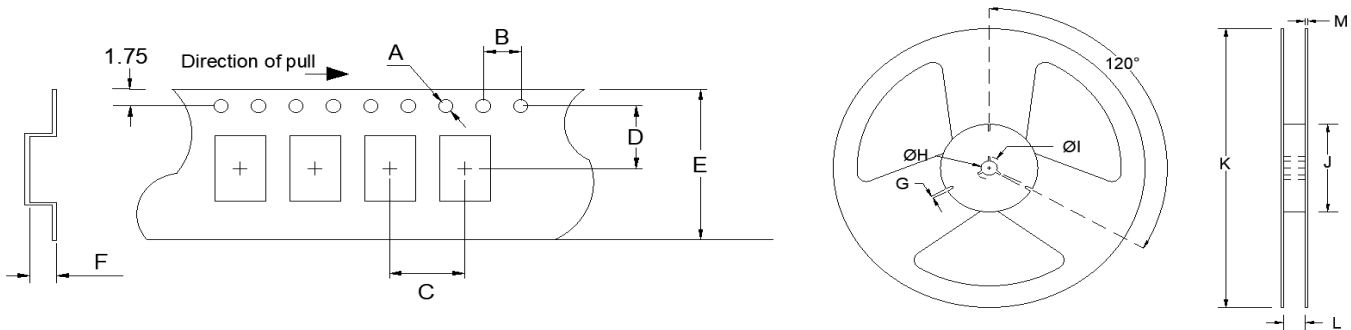


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• TAPE/REEL SPECIFICATIONS

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	7.5	16.0	2.1	-T2 = 2,000	-T1 = 1,000	2.0	Ø13	Ø21	Ø80	Ø255	17.5	2.0



Available Options & Part Identification*

Example: F O7LS C D M 125.0

F	O7LS	C	D	M	125.0
F = Fox	Model Number	Voltage J = 2.5V±10% C = 3.3V±10%	Stability A = ±100PPM B = ±50PPM D = ±25PPM E = ±20 PPM	Temp Code E = -10 to +70°C M = -40 to +85°C P = -40 to +105°C	Frequency (MHz)

*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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