



3.2x2.5mm LVPECL Oscillator

O3PS DATASHEET

- LVPECL 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	13.5 ~ 156.25 MHz
Storage Temperature Range (T_{STG})	$-55 \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	$2.5\text{V} \pm 10\% / 3.3\text{V} \pm 10\%$
Input Current (I_{DD})	70 mA
Standby Current	15 μA
Output Symmetry (50% V_{P-P})	45% ~ 55%
Rise Time (20%~80% V_{P-P})	0.5 nS
Fall Time (80%~20% V_{P-P})	0.5 nS
Output Voltage (V_{OL}) (V_{OH})	$V_{DD} - 1.62\text{V}$ $V_{DD} - 1.025\text{V Min.}$
Output Load	50 Ohms to $V_{DD} - 2.0\text{V}$
Start-up Time (T_S)	10 mS
Output Disable Time ¹	200 nS
Output Enable Time ¹	4 mS
Aging (@ 25C)	± 5 PPM first year
Phase Jitter (12kHz~20MH)	0.5 pS
Maximum Soldering Temp / Time	$260^{\circ}\text{C} / 10$ Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Seal Method	Seam Seal
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

ENABLE / DISABLE FUNCTION	
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

Available Options by Stability & Operating Temp		
Frequency Stability ²	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}$	$-20 \sim +70$	13.500 ~ 156.250
$\pm 100\text{PPM}$	$-40 \sim +85$	13.500 ~ 156.250
$\pm 50\text{PPM}$	$-20 \sim +70$	13.500 ~ 156.250
$\pm 50\text{PPM}$	$-40 \sim +85$	13.500 ~ 156.250
$\pm 25\text{PPM}$	$-20 \sim +70$	13.500 ~ 156.250
$\pm 25\text{PPM}$	$-40 \sim +85$	13.500 ~ 156.250
$\pm 20\text{PPM}$	$-20 \sim +70$	13.500 ~ 156.250

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

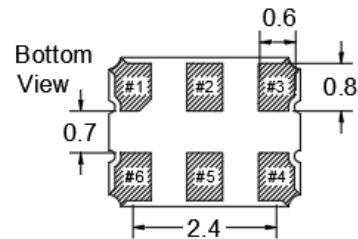
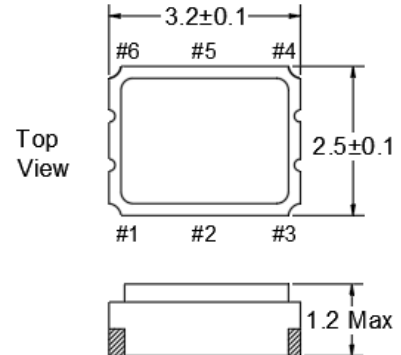
² Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, reflow.

Notes:

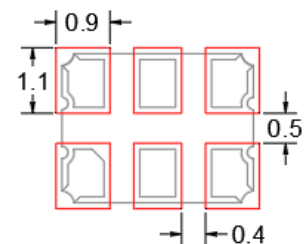
*A $0.01\mu\text{F}$ capacitor should be placed between V_{DD} (Pin 6) and GND (Pin3) to minimize power supply line noise.

*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



Recommended Solder Pad Layout



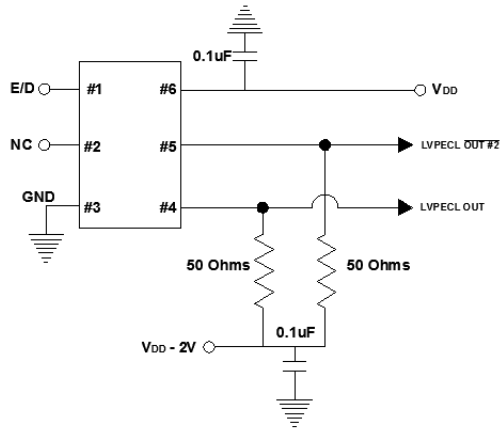
Pin Connections

- | | |
|--------|-------------|
| #1 E/D | #4 Output_1 |
| #2 NC | #5 Output_2 |
| #3 GND | #6 V_{DD} |

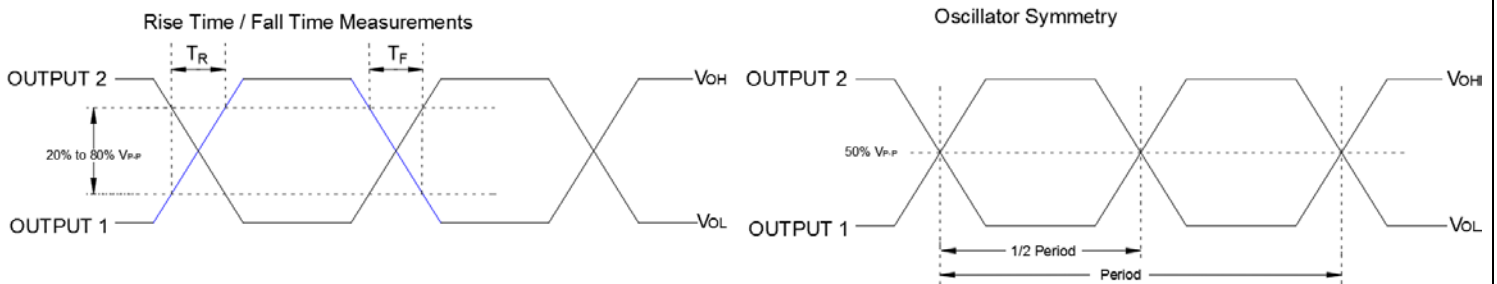
	Title / Description: O3PS SERIES STANDARD SPECIFICATIONS	
	Drawing Number: 101134	Size: A
	Part Number:	Cage: 61429
	Draftsperson: CMR	Approved: BEC
		Revision Date: 07/28/2017



• RECOMMENDED CIRCUIT

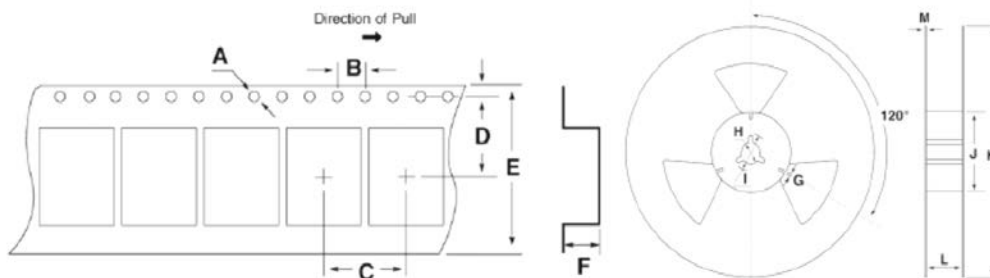


• WAVEFORM CHARACTERISTICS



• TAPE/REEL SPECIFICATIONS

Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Std Reel Qty	G	H	I	J	K	L	M
Φ1.5	4.0	4.0	3.5	8.0	1.4	2,000	2.0	Φ13	Φ21	Φ60	Φ180	9.0	1.2



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Available Options & Part Identification

Example: **F O3PS C B M 25.0**

F	O3PS	C	B	M	25.0
Fox	Model Number	Voltage J = 2.5V±10% C = 3.3V±10%	Stability A = 100PPM B = 50PPM D = 25PPM E = 20PPM*	Operating Temperature F = -20 to +70°C M = -40 to +85°C	Frequency

*20 PPM available for -20~+70°C only.



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