

Features

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

2.5V ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range	40.000 ~ 325.000 MHz
Temperature Range	
Storage (T_{STG})	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	$2.5\text{V} \pm 10\%$
Input Current (I_{DD})	88mA
Standby Current	30 μA
Output Symmetry (50% V_{DD})	
40.000 ~ 170.000 MHz	45% ~ 55%
>170.000 ~ 325.000 MHz	40 % ~ 60 %
Rise Time (20%~80% $V_{\text{P-P}}$)	1nS
Fall Time (80%~20% $V_{\text{P-P}}$)	1nS
Output Voltage (V_{OL})	1.195V
(V_{OH})	1.415V Min.
Output Load (HCMOS)	50 Ohms to $V_{\text{DD}} - 2.0\text{V}$
Start-up Time (T_{S})	10 mS
Output Disable Time ¹	200 nS
Output Enable Time ¹	10 mS
Phase Jitter (12kHz~20MHz BW)	0.3pS Typ.

ENABLE / DISABLE FUNCTION	
Pin ¹	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 for 2.5V ²		
Frequency Stability ²	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}$	$-10 \sim +70$	40.000 ~ 325.000
$\pm 100\text{PPM}$	$-20 \sim +70$	40.000 ~ 325.000
$\pm 100\text{PPM}$	$-40 \sim +85$	40.000 ~ 325.000
$\pm 50\text{PPM}$	$-10 \sim +70$	40.000 ~ 325.000
$\pm 50\text{PPM}$	$-20 \sim +70$	40.000 ~ 325.000
$\pm 50\text{PPM}$	$-40 \sim +85$	40.000 ~ 325.000
$\pm 25\text{PPM}$	$-10 \sim +70$	40.000 ~ 325.000
$\pm 25\text{PPM}$	$-20 \sim +70$	40.000 ~ 325.000
$\pm 25\text{PPM}$	$-40 \sim +85$	40.000 ~ 200.000

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

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

3.3V ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range	40.000 ~325.000 MHz
Temperature Range	
Storage (T _{STG})	-55°C ~ +125°C
Supply Voltage (V _{DD})	3.3V±10%
Input Current (I _{DD})	88mA
Standby Current	30 µA
Output Symmetry (50% V _{DD})	
40.000 ~ 170.000 MHz	45% ~ 55%
>170.000 ~ 325.000 MHz	40 % ~ 60 %
Rise Time (20%~80% V _{P-P})	1nS
Fall Time (80%~20% V _{P-P})	1nS
Output Voltage (V _{OL})	1.7V
(V _{OH})	2.2V Min.
Output Load (HCMOS)	50 Ohms to VDD – 2.0V
Start-up Time (T _S)	10 mS
Output Disable Time ¹	100 nS
Output Enable Time ¹	10 mS
Phase Jitter (12kHz~20MHz BW)	0.3pS Typ.

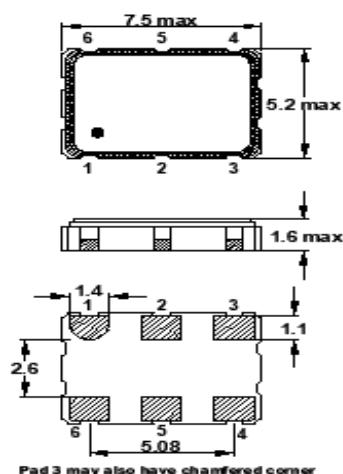
ENABLE / DISABLE FUNCTION	
Pin ²	Out 1 (pin 4), Out 2 (pin 5)
OPEN ¹	Active
'1' Level V _{IH} ≥ 70%V _{DD}	Active
'0' Level V _{IL} ≤ 30%V _{DD}	High Z

Available Options by Stability & Operating Temp for 3.3V ²		
Frequency Stability ²	Operating Temperature (°C)	Frequency Range (MHz)
±100PPM	-10 ~ +70	40.000 ~ 325.000
±100PPM	-20 ~ +70	40.000 ~ 325.000
±100PPM	-40 ~ +85	40.000 ~ 325.000
±50PPM	-10 ~ +70	40.000 ~ 325.000
±50PPM	-20 ~ +70	40.000 ~ 325.000
±50PPM	-40 ~ +85	40.000 ~ 325.000
±25PPM	-10 ~ +70*	40.000 ~ 325.000
±25PPM	-20 ~ +70*	40.000 ~ 325.000
±25PPM	-40 ~ +85*	40.000 ~ 280.000
±20PPM	-10 ~ +70*	40.000 ~ 280.000
±20PPM	-20 ~ +70*	40.000 ~ 280.000

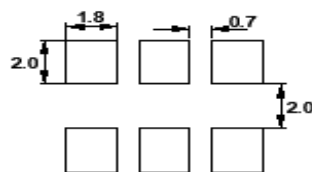
¹ An internal pull-up resistor from pin 2 to pin 6 allows active output if pin 1 is left open

² Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, Shock, vibration. (*Excludes shock and vibration)

DIMENSIONS / MECHANICAL SPECIFICATIONS



Recommended Solder Pad Layout



Pin Connections

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

Note:

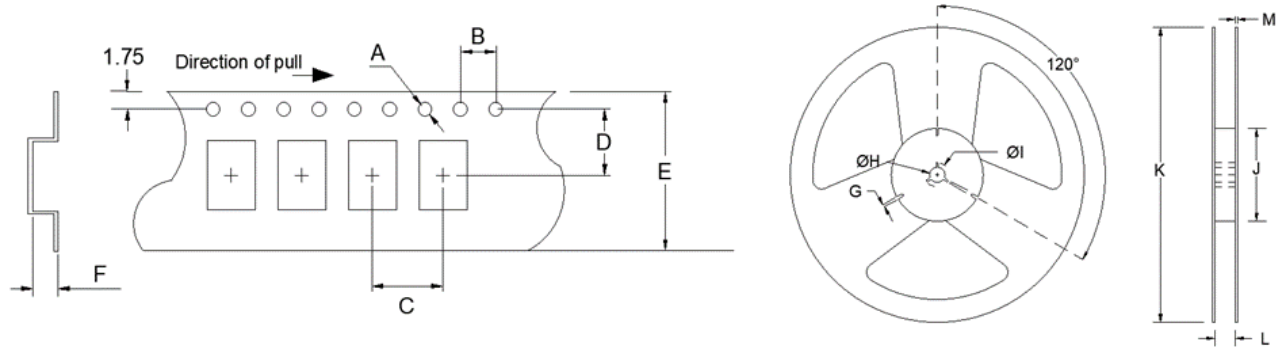
* A 0.01 μ F capacitor should be placed between V_{DD} (Pin 4) and G_{ND} (Pin2) to minimize power supply line noise.

*Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellation's, etc. may vary.

STANDARD SPECIFICATIONS

PARAMETERS	MAX (Unless otherwise noted)
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 (latest version)	Yes

TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
A	B	C	D	E	F	STD REEL QTY	G	H	I	J	K	L	M
ø1.5	4.0	8.0	7.5	16.0	2.15	-T1 = 1,000 -T2 = 2,000	2.0	ø13	ø21	ø80	ø255	17.5	2.0



Available Options & Part Identification for O7PS*

Sample PN: **FO7PSCBM62.5-T1**

F	O7PS	C	B	M	62.5	-T1
Fox	Model Number	Voltage J = 2.5V±10% C = 3.3V±10%	Stability A = ±100PPM B = ±50PPM D = ±25PPM E = ±20PPM	Operating Temperature E = -10 to +70°C F = -20 to +70°C M = -40 to +85°C	Frequency (MHz)	Values Added Options Blank = Bulk T1 = 1,000 pcs T2 = 2,000 pcs

*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_{DD}.

Reliability Test Conditions

Please contact Abracon Quality Assurance department

Mouser Electronics

Authorized Distributor

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ABRACON:

[FO7PSCBE312.5-BULK](#) [FO7PSCDM75.0-T2](#) [FO7PSCDM125.0-T2](#) [FO7PSCDM75.0-T1](#) [FO7PSCBE312.5-T1](#)
[FO7PSCDM125.0-BULK](#) [FO7PSCDM125.0-T1](#) [FO7PSCDM75.0-BULK](#) [FO7PSCAE220.0-BULK](#) [FO7PSCAE220.0-T2](#)
[FO7PSCBE150.0-BULK](#) [FO7PSCBE150.0-T2](#) [FO7PSCBE96.0-T1](#) [FO7PSJBM106.25-BULK](#) [FO7PSJDM200.0-](#)
[BULK](#) [FO7PSBBE156.25-T2](#) [FO7PSCBE100.0-T2](#) [FO7PSCBE120.0-BULK](#) [FO7PSJDM200.0-T2](#) [FO7PSCAE220.0-](#)
[T1](#) [FO7PSCBM212.5-T1](#) [FO7PSCBE50.0-T2](#) [FO7PSJDM100.0-T1](#) [FO7PSCBM212.5-BULK](#) [FO7PSCDM100.0-T2](#)
[FO7PSCDM155.52-BULK](#) [FO7PSCBE50.0-BULK](#) [FO7PSCBE50.0-T1](#) [FO7PSBBE156.25-T1](#) [FO7PSCDM100.0-](#)
[BULK](#) [FO7PSBDE80.158-T1](#) [FO7PSBDM155.52-BULK](#) [FO7PSCBE100.0-BULK](#) [FO7PSCBE150.0-T1](#)
[FO7PSJDM120.0-T2](#) [FO7PSCBE120.0-T2](#) [FO7PSCBE96.0-T2](#) [FO7PSJDM120.0-BULK](#) [FO7PSCAE106.25-BULK](#)
[FO7PSCBE96.0-BULK](#) [FO7PSJDM100.0-BULK](#) [FO7PSJDM100.0-T2](#) [FO7PSBBE156.25-BULK](#) [FO7PSCBE100.0-T1](#)
[FO7PSCBE120.0-T1](#) [FO7PSCBM212.5-T2](#) [FO7PSCDM100.0-T1](#) [FO7PSJDM200.0-T1](#) [FO7PSBDE80.158-BULK](#)
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[FO7PSCBF150.0-T1](#) [FO7PSCBF150.0-T2](#) [FO7PSCBF156.25-T1](#) [FO7PSCBM156.25-T2](#) [FO7PSCDM150.0-T2](#)
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[FO7PSCBM156.0-T1](#) [FO7PSCBM156.0-T2](#) [FO7PSCBM156.25-T1](#) [FO7PSBDM155.52-T1](#) [FO7PSBDM155.52-T2](#)
[FO7PSCAE106.25-T1](#) [FO7PSCAE106.25-T2](#) [FO7PSCBF133.33-T2](#) [FO7PSCDM155.52-T1](#) [FO7PSCDM155.52-T2](#)
[FO7PSJBM106.25-T1](#) [FO7PSJBM106.25-T2](#)