

Features

- LVDS Output
- Temperature Ranges as wide as -40°C to +85°C
- Supply Voltages: 2.5V, 3.3V

2.5V ELECTRICAL CHARACTERISTICS		
PARAMETERS		MAX (Unless otherwise noted)
Frequency (F ₀)		25.0 ~ 320.0 MHz
Storage Temperature Range (T _{STG})		-55 ~ +125°C
Supply Voltage (V _{DD})		2.5V±5%
Input Current (I _{DD})		35 mA
Standby Current		15 µA
Output Symmetry (50% V _{P-P})		45% ~ 55%
Rise Time (20%~80% V _{P-P})		0.4 nS
Fall Time (80%~20% V _{P-P})		0.4 nS
Differential Output Voltage (V _{OD})		0.247V ~ 0.454V
Differential Offset Voltage (V _{OS})		1.125V ~ 1.375V
V _{OH}		1.4 Typical to 1.60 Max
V _{OL}		0.90 Min to 1.10 Typical
Output Termination		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~5MHz), ≤ 40MHz (12kHz~20MHz), >40MHz		0.5 pS
ENABLE / DISABLE FUNCTION		
INH (pin 1)		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 2.5V		
Frequency Stability	Operating Temperature (°C)	Frequency Range (MHz)
±100PPM ²	-10 ~ +70	25.0 ~ 320.0
±100PPM ²	-40 ~ +85	25.0 ~ 320.0
±50PPM ²	-10 ~ +70	25.0 ~ 320.0
±50PPM ²	-40 ~ +85	25.0 ~ 320.0
±25PPM ²	-10 ~ +70	25.0 ~ 320.0
±25PPM ²	-40 ~ +85	25.0 ~ 170.0
±20PPM ³	-10 ~ +70	25.0 ~ 170.0

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, and one-year aging.

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

3.3V ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency (F ₀)	25.0 ~ 320.0 MHz
Storage Temperature Range (T _{STG})	-55 ~ +125°C
Supply Voltage (V _{DD})	3.3V±10%
Input Current (I _{DD})	39 mA
Standby Current	15 µA
Output Symmetry (50% V _{DD})	45% ~ 55%
Rise Time (20%~80% V _{P-P})	0.4 nS
Fall Time (80%~20% V _{P-P})	0.4 nS
Differential Output Voltage (V _{OD})	0.247V ~ 0.454V
Differential Offset Voltage (V _{OS})	1.125V ~ 1.375V
V _{OH}	1.4 Typical to 1.60 Max
V _{OL}	0.90 Min to 1.10 Typical
Output Termination (LVDS)	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~5MHz), ≤40MHz (12kHz~20MHz), >40MHz	0.5 pS

ENABLE / DISABLE FUNCTION	
INH (pin 1)	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

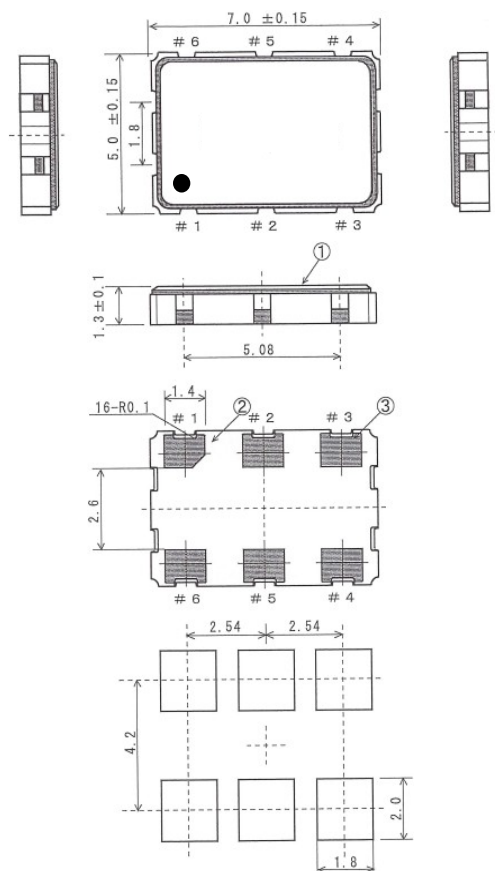
Available Options by Stability & Operating Temp for 3.3V		
Frequency Stability	Operating Temperature (°C)	Frequency Range (MHz)
±100PPM ²	-10 ~ +70	25.0 ~ 320.0
±100PPM ²	-40 ~ +85	25.0 ~ 320.0
±50PPM ²	-10 ~ +70	25.0 ~ 320.0
±50PPM ²	-40 ~ +85	25.0 ~ 320.0
±25PPM ²	-10 ~ +70	25.0 ~ 320.0
±25PPM ²	-40 ~ +85	25.0 ~ 170.0
±20PPM ³	-10 ~ +70	25.0 ~ 170.0

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, and one-year aging.

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

DIMENSIONS / MECHANICAL SPECIFICATIONS



Pin Connections

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

Note:

*A $0.01\mu\text{F}$ capacitor should be placed between VDD (Pin 6) and GND (Pin 3) 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, reference pin shape, pin 1 chamfer etc. may vary

STANDARD SPECIFICATIONS

PARAMETERS	MAX (Unless otherwise noted)
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL) per J-STD-033	1
Termination Finish	Au ($0.3 \sim 1\mu\text{m}$) over Ni ($1.27 \sim 8.89\mu\text{m}$)
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS Compliant	Yes, no exemptions
REACH Compliant	Yes

FO7LS

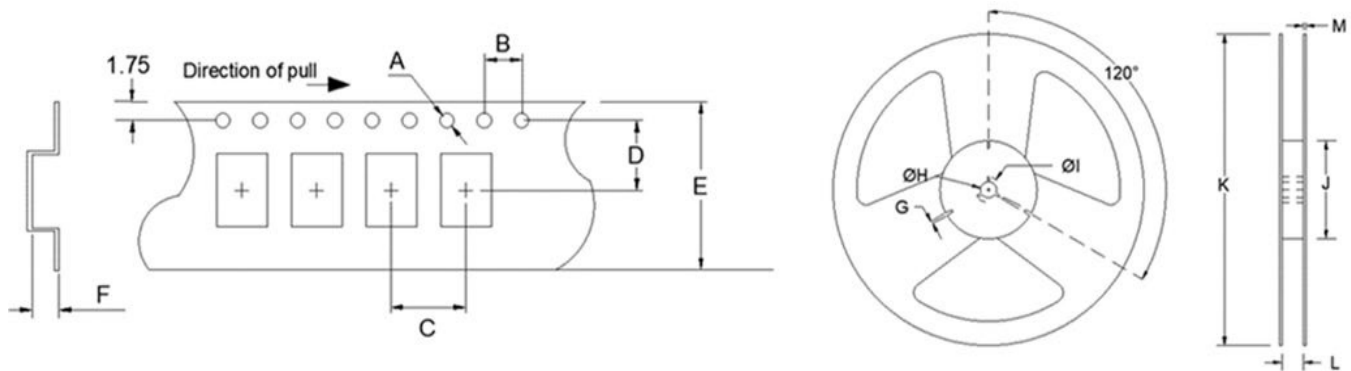
(Former F4700, F4710 Series)

7.0mm x 5.0mm

LVDS Oscillator



TAPE SPECIFICATIONS (mm)						REEL SPECIFICATIONS (mm)							
A	B	C	D	E	F	REEL QTY	G	H	I	J	K	L	M
ø1.5	4.0	8.0	7.5	16.0	2.45	-T2 = 2,000	2.0	ø13	ø21	ø80	ø255	17.5	2.0



Available Options & Part Identification for LVDS Oscillator FO7LS*

Sample PN: **FO7LSCDM125.0-T2**

F	O7LS	C	D	M	125.0	-T2
Fox	Model Number	Voltage H = 2.5V±5% C = 3.3V±10%	Stability A = ±100PPM B = ±50PPM D = ±25PPM E = ±20 PPM	Operating Temperature E = -10 to +70°C M = -40 to +85°C	Frequency (MHz)	Values Added Options Blank = Bulk 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 table on page 2.

Reliability Test Conditions

Please contact Abracon Quality Assurance department