

Features

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

2.5V ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency (F_o)	25.0 ~ 400.0 MHz
Storage Temperature Range (T_{STG})	$-55 \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	$2.5\text{V} \pm 10\%$
Input Current (I_{DD})	63 mA
Standby Current	30 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
Differential Output Voltage (V_{OD})	0.247V ~ 0.454V
Differential Offset Voltage (V_{OS})	1.125V ~ 1.375V
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~20MHz)	1 pS

ENABLE / DISABLE FUNCTION	
Pin ¹	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 for 2.5V		
Frequency Stability ²	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}^2$	$-10 \sim +70$	25.0 ~ 400.0
$\pm 100\text{PPM}^2$	$-20 \sim +70$	25.0 ~ 400.0
$\pm 100\text{PPM}^2$	$-40 \sim +85$	25.0 ~ 400.0
$\pm 50\text{PPM}^2$	$-10 \sim +70$	25.0 ~ 400.0
$\pm 50\text{PPM}^2$	$-20 \sim +70$	25.0 ~ 400.0
$\pm 50\text{PPM}^2$	$-40 \sim +85$	25.0 ~ 400.0
$\pm 25\text{PPM}^2$	$-10 \sim +70$	25.0 ~ 400.0
$\pm 25\text{PPM}^2$	$-20 \sim +70$	25.0 ~ 400.0
$\pm 25\text{PPM}^3$	$-40 \sim +85$	25.0 ~ 400.0
$\pm 20\text{PPM}^3$	$-20 \sim +70$	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, Vibration, reflow, and one-year aging, shock, and vibration.

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

3.3V ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency (Fo)	25.0 ~ 400.0 MHz
Storage Temperature Range (T _{STG})	-55 ~ +125°C
Supply Voltage (V _{DD})	3.3V±10%
Input Current (I _{DD})	63 mA
Standby Current	30 µA
Output Symmetry (50% V _{DD})	45% ~ 55%
Rise Time (20%~80% V _{P-P})	0.5 nS
Fall Time (80%~20% V _{P-P})	0.5 nS
Differential Output Voltage (V _{OD})	0.247V ~ 0.454V
Differential Offset Voltage (V _{OS})	1.125V ~ 1.375V
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~20MHz)	1 pS

ENABLE / DISABLE FUNCTION	
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

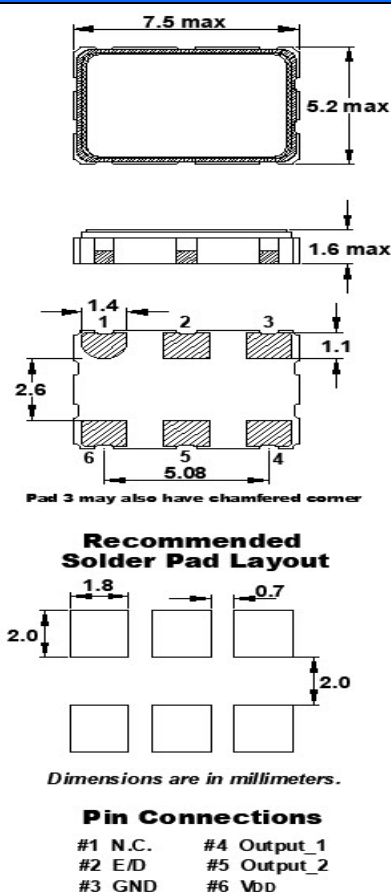
Available Options by Stability & Operating Temp for 3.3V		
Frequency Stability ²	Operating Temperature (°C)	Frequency Range (MHz)
±100PPM ²	-10 ~ +70	25.0 ~ 400.0
±100PPM ²	-20 ~ +70	25.0 ~ 400.0
±100PPM ²	-40 ~ +85	25.0 ~ 400.0
±50PPM ²	-10 ~ +70	25.0 ~ 400.0
±50PPM ²	-20 ~ +70	25.0 ~ 400.0
±50PPM ²	-40 ~ +85	25.0 ~ 400.0
±25PPM ²	-10 ~ +70	25.0 ~ 400.0
±25PPM ²	-20 ~ +70	25.0 ~ 400.0
±25PPM ³	-40 ~ +85	25.0 ~ 400.0
±20PPM ²	-10 ~ +70	25.0 ~ 400.0
±20PPM ³	-20 ~ +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, Vibration, reflow, and one-year aging, shock, and vibration.

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

DIMENSIONS / MECHANICAL SPECIFICATIONS



Note:

*A 0.01 μ F capacitor should be placed between VDD (Pin 4) and GND (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 castellations, reference pin shape, 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 (0.3~1 μ m) over Ni (1.27~8.89 μ m)
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS Compliant	Yes, no exemptions
REACH Compliant	Yes

FO7LD

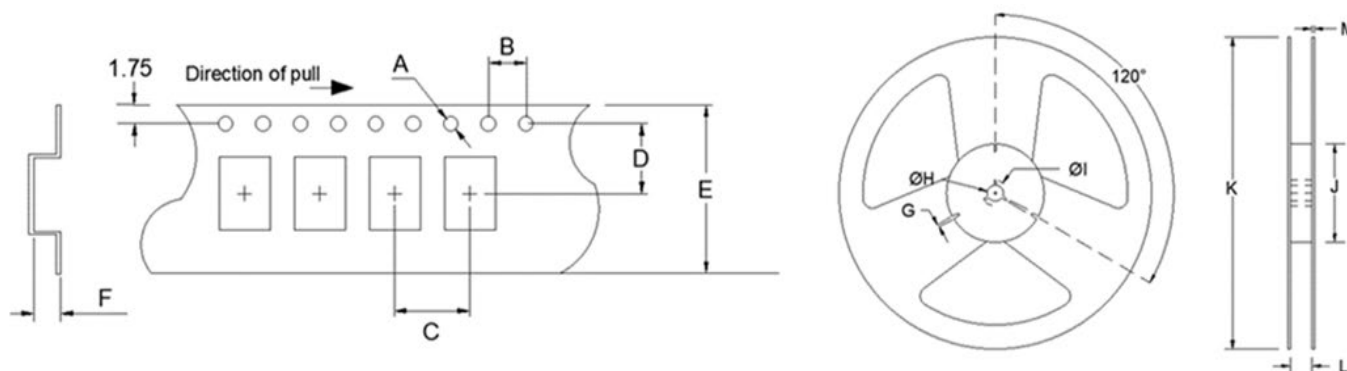
(Former F4700A, F4710A Series)

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	4.0	3.5	8.0	1.4	-T1 = 1,000 -T2 = 2,000	2.0	ø13	ø21	ø60	ø180	9.0	1.2



Available Options & Part Identification for LVDS Oscillator O7LD*

Sample PN: **FO7LDCDM125.0-T2**

F	O7LD	C	D	M	125.0	-T2
Fox	Model Number	Voltage J = 2.5V±10% C = 3.3V±10%	Stability A = ±100PPM B = ±50PPM D = ±25PPM E = ±20 PPM	Operating Temperature 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 table for each V_{DD}.

Reliability Test Conditions

Please contact Abracon Quality Assurance department

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ABRACON:

[FO7LDCBM125.0-BULK](#) [FO7LDCBM125.0-T1](#)