

JUST-IN-TIME OSCILLATORS

JITO®-2
PACKAGE B
8 Pin DIP

The new JITO®-2 (Just In Time Oscillators) line represents Fox's latest contribution to helping buyers and engineers alike meet the increasing pressure of bringing new designs and products to market faster and more efficiently. This new line of crystal oscillators cuts the industry standard lead time of 10 weeks down to just 10 days or less for custom and standard frequency oscillators; 48 hours for evaluation units. Engineers need custom frequencies as quickly as possible to test and prove their prototypes. Production people need to know that custom frequency products can be accessed quickly without holding up their line. And buyers have to ensure that they can satisfy both engineering and production needs. The JITO®-2 line provides a total solution to those requirements by cutting industry standard lead times by an average of 90%.



Features

- Custom and standard frequencies from 1.000 up to 250MHz
- 100, 50, 30, 25, 20 PPM stability
- 3.3 or 5 volts; -20 to 70°C or -40 to +85°C operating range
- Half-size Metal Dip.
- Fox quality built-in and test verified.
- Enable/Disable option available.

• ELECTRICAL CHARACTERISTICS (Ta = 25°C, CL = Max Load)					
PARAMETERS	FREQUENCY RANGE	CONDITIONS	MIN	MAX	UNITS
Frequency Range (Fo)			1.000	250.000	MHz
Frequency Stability	1.000 ~ 250.000 MHz	All Conditions*	-100 -50 -30 -25 -20	+100 +50 +30 +25 +20***	PPM
Temperature Operating Storage	1.000 ~ 250.000 MHz		-20 -40 -55	+70 +85 +125	°C
Supply Voltage (VDD)	1.000 ~ 250.000 MHz		+4.5 +3.0	+5.5 +3.6	V
Input Current (IDD)	1.000 ~ 25.000 25.000+ ~ 50.000 50.000+ ~ 150.000 150.000+ ~ 250.000	Vdd = 5.0V Max Load (HCMOS)		15 20 33 55	mA

		0.340 ~ 250.000	Vdd = 5.0V PECL		55	
		1.000 ~ 25.000	Vdd = 3.3V		8	
		25.000+ ~ 50.000	Max Load (HCMOS)		11	
		50.000+ ~ 150.000			21	
		150.000+ ~ 250.000			20	
		1.000 ~ 250.000 MHz	Vdd = 3.3V PECL		30	
Output Symmetry	HCMOS	1.000 ~ 250.000 MHz	50% VDD Level	45	55	%
	PECL		50% Vp-p Level	40	60	
Rise Time	HCMOS	1.000 ~ 250.000 MHz	10% ~ 90% VDD Level		5	nS
	PECL		20% ~ 80% Vp-p Level		2	
Fall Time	HCMOS		90% ~ 10% VDD Level		5	
	PECL		80% ~ 20% Vp-p Level		2	
Output Voltage		1.000 ~ 250.000 MHz	Vdd = 5.0V ± 10% Iol = 4mA Ioh = -4mA	90%	10%	V
			Vdd = 3.3V ± 10% Iol = 2mA Ioh = -2mA	90%	10%	
		1.000 ~ 200.000**	Vdd = 5.0V Per recommended termination	3.0 3.9	3.4 4.3	V
			Vdd = 3.3V Per recommended termination	1.2 2.2	1.6 2.6	
Output Current	HCMOS	1.000 ~ 250.000	Vdd = 5.0V ± 10% Vol = 10% Vdd Voh = 90% Vdd		4 -4	mA
			Vdd = 3.3V ± 10% Vol = 10% Vdd Voh = 90% Vdd		2 -2	
Output Load		1.000 ~ 100.000 100.000+ ~ 250.000	VDD = 5.0V ± 10% (HCMOS)		25 10	pF
		1.000 ~ 100.000 100.000+ ~ 250.000	VDD = 3.3V ± 10% (HCMOS)		15 10	
Start-up Time (Ts)		1.000 ~ 250.000			10	mS
Enable / Disable Option		1.000 ~ 250.000			100	nS
Output Skew		1.000 ~ 250.000	50% Vp-p (PECL)			

*Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock and vibration.

** PECL can be programmed to 250 MHz; output terminations may have to be modified for desired output levels. See Application Note "JITO-2 PECL Interface Considerations".

***Available from -20°C to +70°C, inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock and vibration.

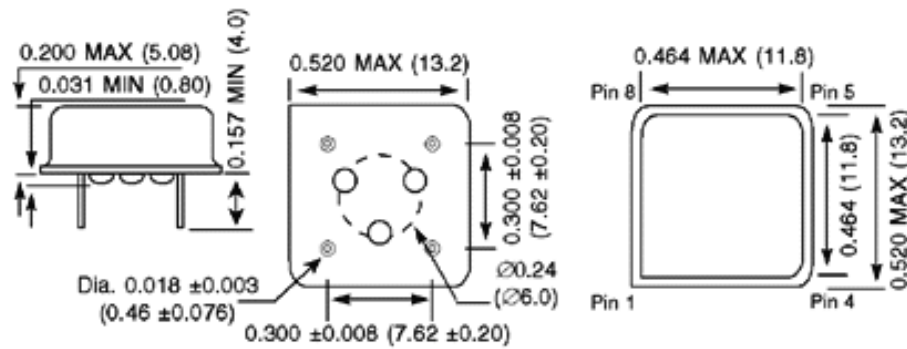
PACKAGE B:
HALF SIZE
8 PIN DIP

Pin Connections:
1 N.C. (Standard)
4 GND
5 Output
8 VDD

Application Precautions: It is recommended that a sample be evaluated in each application before adding JITO®-2 or any other oscillator to the AVL.

This JITO®-2 series of products utilize PLL technology.

As a result, overall circuit jitter will often increase if applied to another PLL device. Please contact Fox technical support if you require assistance.



JITO®-2 PART DESCRIPTION GUIDE

JITO®-2 - B C 3 A M C - 106.250000

Package Style:	Type:	Supply Voltage:	Stability:	Temperature Range:	Frequency (MHz)
A = 14 Pin DIP	C = HCMOS	5 = +5.0V	A = ±100ppm	E = -10°C to +70°C	
B = 8 Pin DIP	P = PECL	3 = +3.3V	B = ±50ppm	F = -20°C to +70°C	
D = MIN-6 (5x7.5x1.5mm 6 Pad SMD)	S = HCMOS (Standby)		C = ±30ppm**	M = -40°C to +85°C	C = Custom (or leave blank)
P = Plastic (10x13x5mm)			D = ±25ppm**		

* Patent Numbers: US 6,664,860, US 5,960,403, US 5,952,890; US 5,960,405; US 6,188,290; Foreign Patents: R.S.A. 98/0866, R.O.C. 120851; Singapore 67081, 67082; EP 0958652
China ZL 98802217.6, Malaysia MY-118540-A, Philippines 1-1998-000245
US and Foreign Patents Pending
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