

# F1139BA Series

## 9x14 mm FR-4, 3.3 Volt, PECL, Clock Oscillator



- Former **Champion TECHNOLOGIES, INC.** Product
- Clock Recovery, Optic Transmission Equipment, Digital Cross Connect Equipment

### Ordering Information

**00.0000**  
**MHz**

**F1139BA X X -R**

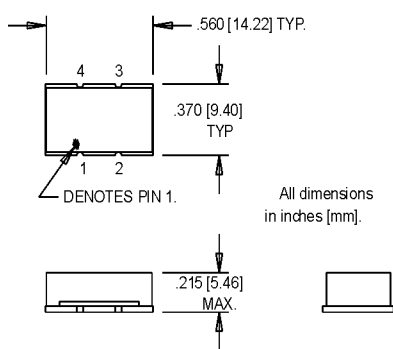
Package \_\_\_\_\_

Stability \_\_\_\_\_  
 Blank: ±20 ppm (0°C to +70°C only)  
 B: ±50 ppm

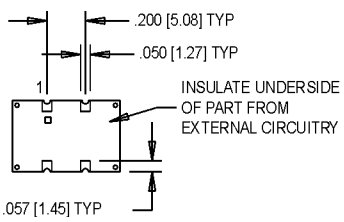
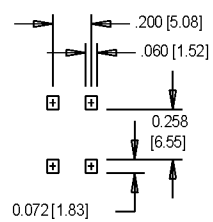
Temperature Range \_\_\_\_\_  
 Blank: 0°C to +70°C  
 M: -40°C to +85°C

RoHS Compliance \_\_\_\_\_  
 Blank: non-RoHS compliant part  
 -R: RoHS compliant part

Frequency (customer specified) \_\_\_\_\_



SUGGESTED SOLDER PAD LAYOUT



### Pin Connections

PIN	FUNCTION
1	Output
2	Vss/Ground
3	Output
4	+Vcc

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
	Frequency Range	F	70		200	MHz		
	Operating Temperature	T <sub>A</sub>	(See Ordering Information)					
	Storage Temperature	T <sub>s</sub>	-40		+85	°C		
	Frequency Stability	ΔF/F	(See Ordering Information)					See Note 1
	Aging							
	1st Year			±2		ppm		
	Thereafter (per year)			±1		ppm		
	Input Voltage	V <sub>cc</sub>	3.135	3.3	3.465	V		
	Input Current	I <sub>cc</sub>			70	mA		
	Output Type						PECL	
	Load		50 Ω to (V <sub>cc</sub> - 2V) or Thevenin equivalent					
	Symmetry (Duty Cycle)		45		55	%	(V <sub>cc</sub> - 1.3) ref. level	
	Output Skew				100	ps	50%	
	Logic "1" Level	V <sub>oh</sub>	V <sub>cc</sub> -1.02		V <sub>cc</sub> -0.72	V	50Ω into (V <sub>cc</sub> - 2) load	
Logic "0" Level	V <sub>ol</sub>	V <sub>cc</sub> -1.95		V <sub>cc</sub> -1.60	V	50Ω into (V <sub>cc</sub> - 2) load		
Rise Time	T <sub>r</sub>			450	ps	20% to 80%		
Fall Time	T <sub>f</sub>			450	ps	80% to 20%		
Start up Time				10	ms			
Random Jitter	R <sub>j</sub>		5	12	ps RMS	1-Sigma		

1. Inclusive of calibration, temperature, voltage, load and 10 years aging.

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

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# MtronPTI Lead Free Solder Profile

