

# FV1400A Series

## 9x14 mm FR-4, 5.0 Volt, Sinewave, VCXO



- Former **Champion Technologies, Inc.** Product
- Phase Locked Loops (PLL's) & Clock Recovery where phase noise integrity is critical

**Ordering Information**

**00.0000 MHz**

**FV1400A X**

Product Series \_\_\_\_\_

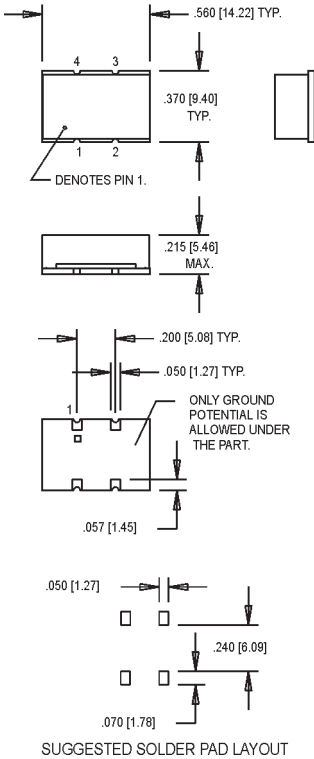
Temperature Range \_\_\_\_\_

Blank: -10°C to +70°C

M: -40°C to +85°C

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

All dimensions in inches [mm].



PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Frequency Range	F	70		170	MHz	
Frequency Stability:	$\Delta F/F$					
Overall		Inclusive of Calibration, Temperature, Voltage, Load, and Aging				
0°C to +70°C			±35		ppm	
-40°C to +70°C			±40		ppm	
Pullability (Typical)		±70		±150	ppm	
Guaranteed APR				±35	ppm	
Linearity				10	%	
Modulation Bandwidth	fm	>10			kHz	±3dB
Control Voltage	Vc	0.5	2.5	4.5	V	
Transfer Function		Positive				
Input Impedance		>50K $\Omega$				@ 10 kHz
Operating Temperature	T <sub>A</sub>	-40		+85	°C	
Storage Temperature	T <sub>S</sub>	-40		+85	°C	
Input Voltage	V <sub>dd</sub>	4.75	5.0	5.25	V	
Input Current	I <sub>dd</sub>			40	mA	
Leakage Current				200	mA	(Pin 1, V <sub>c</sub> = 4.5V)
Start up Time				10	ms	
Output Signal		Sinewave				
Load				50	$\Omega$	
Output Power				+3±3	dBm	
Harmonics				-20	dBc	
Sub-Harmonics & Spurious Modes				-70	dBc	
Phase Noise (Typical)		10Hz	100 Hz	1 kHz	10 kHz	100 kHz
		-60	-95	-125	-145	-150
		Offset from carrier				
Temperature Cycle		MIL-STD-883, Method 1010, Condition B			-55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell	
Mechanical Shock		MIL-STD-883, Method 2002, Condition B			1500 g's	
Vibration		MIL-STD-883, Method 2007, Condition B			20-2000 Hz; 0.06 inch; 15 g's; 3 planes	
Humidity Steady State		MIL-STD-202, Method 103			40°C; 90%-95% R.H.; 56 days	
Thermal Shock		MIL-STD-883, Method 1011.7, Cond. B			100°C to 0°C; Water-to-Water; 15 cycles	
Electrostatic Discharge		MIL-STD-883, Method 3015, Class II			2 KV to 4 KV Threshold	
Solderability		MIL-STD-883, Method 2022.2			Solder dip; Meniscograph Criteria	
Hermeticity		MIL-STD-883, Method 1014.8, Cond. A1			Mass spectro. 2 x 10 <sup>-8</sup> atoms. CC/sec He	
Resistance to Soldering		See "Figure 2" on page 147				
Lead Integrity		MIL-STD-883, Mtd. 2004.5, Cond. A,B1			Lead tension & bend stress	
Marking Permanence		MIL-STD-883, Method 2015.8			Resistance to solvents	
Life Test		MIL-STD-883, Method 1005.6			125°C, powered, 1000 hours minimum	

### Pin Connections

PIN	FUNCTION
1	Voltage Control
2	Ground/Case Gnd
3	Output
4	+V <sub>dd</sub>

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