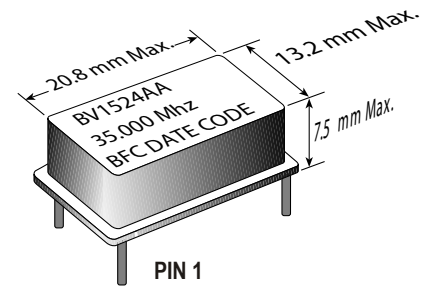




**5V Voltage Controlled Crystal Oscillators**

**Applications:**

- Phase Locked Loops (PLL's)
- Clock Recovery
- Reference Signal Tracking
- Synthesizers
- Frequency Modulation/Demodulation



**Features:**

- 2.0 to 52 MHz Frequency Range
- 0.5V to 4.5V Control Voltage
- ±25ppm Stability
- Variety of Deviation Sensitivity Options
- -40°C to +85°C Operating Temperature Range
- UM1 Crystal

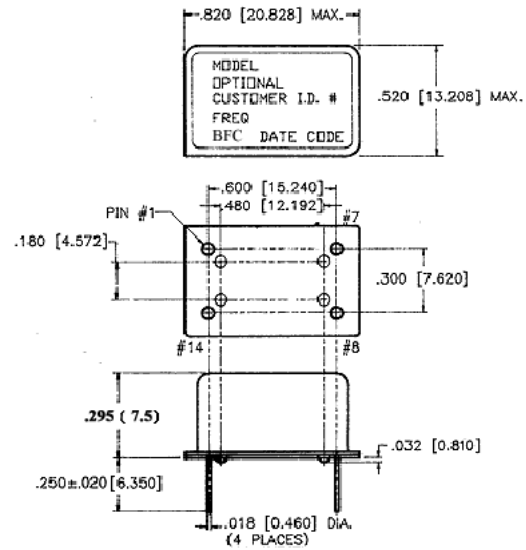


**Electrical Specifications**

Model	BV1524AA	
Frequency Range (MHz)	2 to 52.000	
Input Current (mA)	< 26	
Frequency Control Function	For Custom Deviation Range, Vc Range, etc, Consult Factory	
Deviation (ppm)		
Minimum	± 300 ppm	
Maximum	± 525 ppm	
Linearity (%)	< 15	
Modulation Bandwidth (± 3 dB)	> 20 KHz	
Nominal Control Voltage ( V )	2.5	
Control Voltage Range ( V )	0.5 to 4.5	
Transfer Function	Positive	
Input Impedance	> 50KΩ @ 10 KHz	
Frequency Stability (ppm)		
Overall	Inclusive of Calibration, Temp. Volt. Load and Aging	
0°C to + 70°C	± 50 ppm	
-40°C to + 85°C	± 70 ppm	
Temperature Range		
Operating	-40°C to +85°C	
Storage	-40°C to +125°C	
Supply Voltage ( V )	+ 5.0 V ± 5%	
Symmetry (%) CMOS/TTL	40/60	
Start Up Time (ms)	< 10	
Typical SSB Phase Noise (dBC/Hz) Offset from Carrier	10 Hz	- 65
	100 Hz	- 95
	1 KHz	- 120
	10 KHz	- 140
	100 KHz	- 150

## Mechanical Dimensions

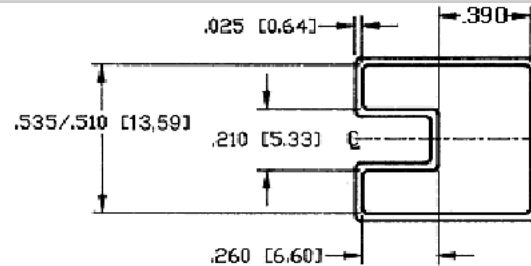
PIN	Function
1	Voltage Control
7	Gnd/ & Case Gnd
8	Output
14	+V <sub>CC</sub>



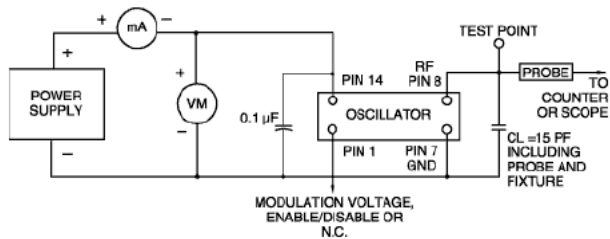
### Part Numbering Guide

**BV1524AA X** - Specify Frequency  
 "Blank" = 0°C to 70°C Operating Temp.  
 "M" = -40°C to +85°C Operating Temp.

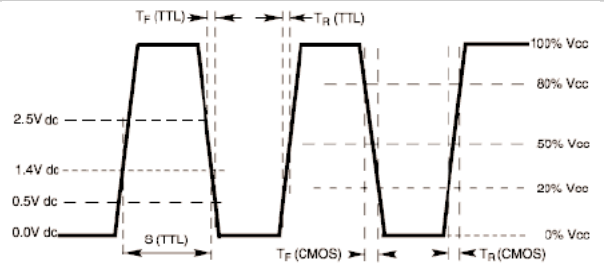
### Shipping Tube Cross Section



### Test Circuit Diagram



### Output Waveform



## Mechanical and Environmental Specifications

Test	Reference Documents	Test Description
Temperature Cycle	MIL-STD-883, Mtd 1010, Cond. B	-55°C to + 25°C; Air to Air; 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-883, Mtd 2002, Cond. B	1500g's
Vibration	MIL-STD-883, Mtd 2007, Cond. B	20-2000 Hz; 0.06 inch; 15 g's; 3 planes
Humidity Steady State	MIL-STD-202, Mtd 103	40°C; 90%-95% R.H.; 56 days
Thermal Shock	MIL-STD-883, Mtd 1011.7, Cond. B	100°C to 0°C; Water-to-Water; 15 cycles
Electrostatic Discharge	MIL-STD-883, Mtd 3015, Class II	2 KV to 4 KV Threshold
Solderability	MIL-STD-883, Mtd 2022.2	Solder dip; Meniscograph Criteria
Hermeticity	MIL-STD-883, Mtd 1014.8, Cond. A1	Mass spectro. 2 X 10 <sup>-8</sup> atmos. CC/sec He
Resistance to Soldering	MIL-STD-202, Mtd 210D, Cond. C	260°C; 10 seconds; 1 inch/sec.
Lead Integrity	MIL-STD-883, Mtd 2004.5 Cond. A, B1	Lead tension and bend stress
Marking Permanence	MIL-STD-883, Mtd 2015.8	Resistance to solvents
Life Test	MIL-STD-883, Mtd 1005.6	125°C, powered, 1000 hours minimum

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**E mail: [sales@bfc-inc.com](mailto:sales@bfc-inc.com)**  
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