

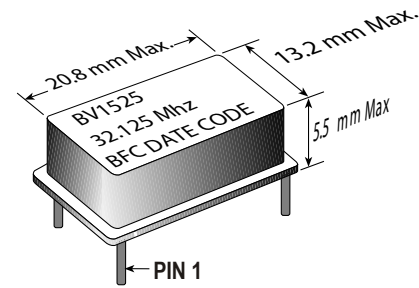


**Applications:**

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

**Features:**

- 2.0 to 40 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
- Open Crystal
- 14 Pin and 8 Pin DIL Package



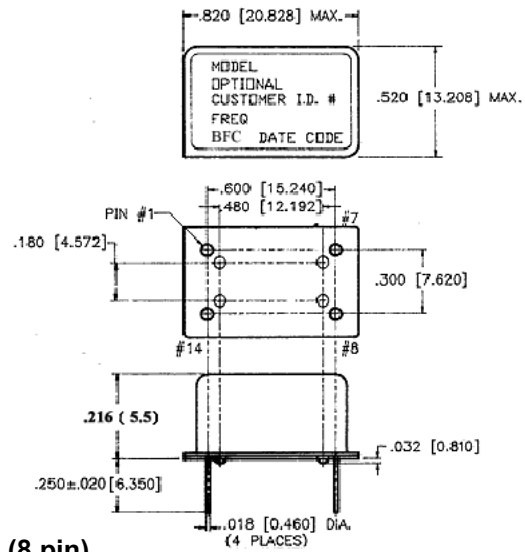
**Electrical Specifications**

Model 14 Pin	BV1525AA	BV1525AC	BV1525AD		BV1525AE	BV1525AF
Model 8 Pin	BV525AA	BV525AC	BV525AD		BV525AE	BV525AF
Frequency Range MHz	2-40	2-40	2-33	33-40	2-33	2-40
Frequency Stability (ppm)	Inclusive of Calibration, Temperature, Voltage, Load, Shock, Vibration, Aging					
0°C to 70°C	±25		±40		±35	
-40°C to + 85°C	±50		±60		±60	
Frequency Control Function	For custom Deviation Range, Vc range, Transfer function, etc.					
Deviation (ppm)						
Minimum	±100	±60	±80		±150	±120
Maximum	±150	±100	±120		±250	±250
Linearity	7%	10%	7%		10%	
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	> 50K ohms @ 10 KHz					
Temperature Range						
Operating Temp.	- 40°C to + 85°C					
Storage Temp.	-40°C to +125°C					
Supply Voltage	+ 5.0 ±10%					
Input Current (mA)	< 26					
Output						
Symmetry % TTL	45/55					
Symmetry % CMOS	< 33 MHz 45/55, ≥ 33 MHz 40/60					
Start Up Time (ms)	< 10					
Test Circuit Diagram	Refer to Chart					
Typical Phase Noise (dBc/Hz) Offset from Carrier	10 Hz					-65
	100 Hz					-95
	1 KHz					-120
	10 KHz					-140
	100 KHz					-150

### Full Size (14 pin)

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

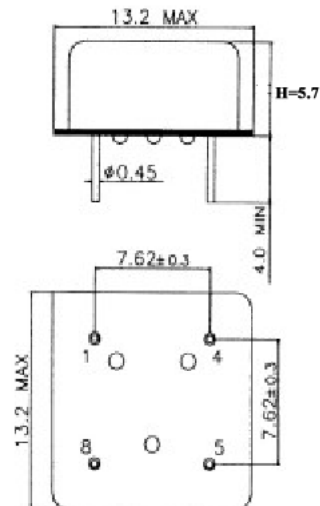
### Mechanical Dimensions



### Half Size (8 pin)

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

### Mechanical Dimensions

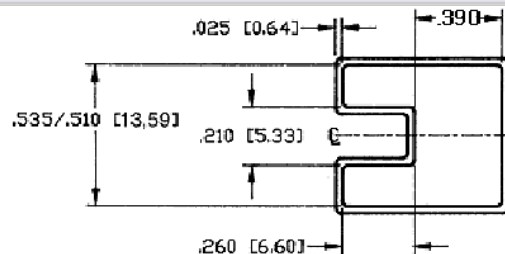


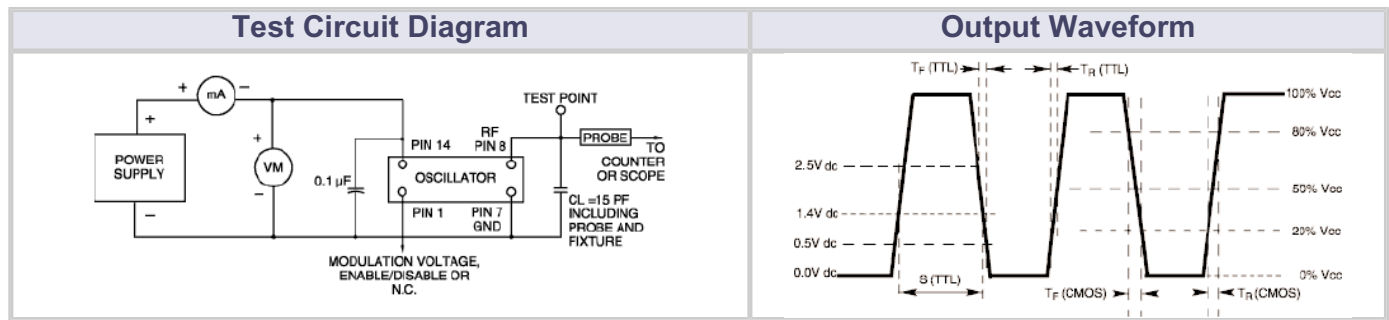
### Part Numbering Guide

(14 pin) **BV1525AXX** - Specify Frequency  
 (8 pin) **BV525AXX** - Specify Frequency

- “Blank” = 0°C to 70°C Operating Temp.
- “M” = -40°C to +85°C Operating Temp.
- Deviation options - See Above Table

### Shipping Tube Cross Section





## 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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