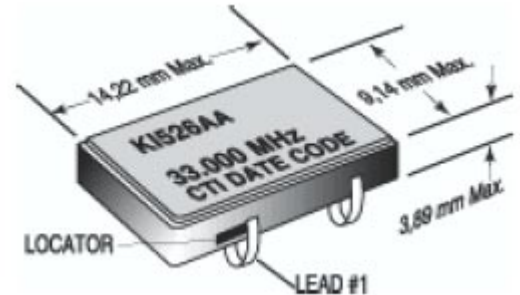


# K1526A Series

## 5V 9x14mm Surface Mount Voltage Controlled Crystal Oscillator



- **Applications:** Phase-Locked Loops (PLL's), Clock Recovery, Reference Signal Tracking, Synthesizers, Frequency Modulation/Demodulation
- Ceramic Construction, Medal Lid
- 2.0 to 40 MHz Frequency Range
- 0.5V to 4.5 V Control Voltage
- $\pm 25$  ppm Stability
- $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  Operating Temperature Option
- Tape and Reel Available
- Ground Shielded Top and Bottom
- 4-pin SOJ-20 Footprint
- J-Leads Seam-sealed, Resistance Welded Hermetic Package



**Not Recommended for New Designs. Refer to K1570A & K1570AQH Series as an Alternative.**

### ELECTRICAL SPECIFICATIONS

Model	K1526AA		K1526AD	
Frequency Range (MHz)	2 to 33	33.1 to 40	2 to 33	33.1 to 40
Frequency Stability (ppm)	Inclusive of Calibration, Temperature, Voltage, Load, and Aging			
Overall				
0°C to +70°C	$\pm 25$		$\pm 40$	
$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$	$\pm 50$		$\pm 60$	
Frequency Control Function	(For Custom Deviation Range, Vc Range, transfer function, etc. – Consult Factory)			
Deviation (Typical)				
Minimum	$\pm 100$		$\pm 80$	
Maximum	$\pm 150$		$\pm 40$	
Linearity	<5%	<10%	<5%	
Modulation Bandwidth ( $\pm 3\text{dB}$ )	>20KHz			
Nominal Control Voltage (V)	2.5			
Control Voltage Range (V)	0.5 to 4.5			
Transfer Function	Positive			
Input Impedance	> 50K $\Omega$ @ 10KHz			
Temperature Range ( $^{\circ}\text{C}$ )				
Operating	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$			
Storage	$-40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$			
Supply Voltage (V)	$+5.0\text{V} \pm 10\%$			
Input Current (mA)	<26			
Start Up Time (ms)	<10			
Symmetry (%) TTL	45/55			
Symmetry (%) CMOS	<33 MHz 45/55, $\geq 33$ MHz 40/60			
Typical SSB Phase Noise (dBC/Hz)	10Hz		-65	
Offset from Carrier	100Hz		-95	
	1KHz		-120	
	10KHz		-140	
	100KHz		-150	

#### PART NUMBERING GUIDE

K1526AXX	-Specific Frequency
└─	“Blank” = $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ Operating Temp.
└─	“M” = $40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ Operating Temp
└─	Model Selection: See Table Above

#### PART NUMBERING GUIDE ROHS COMPLIANT PART

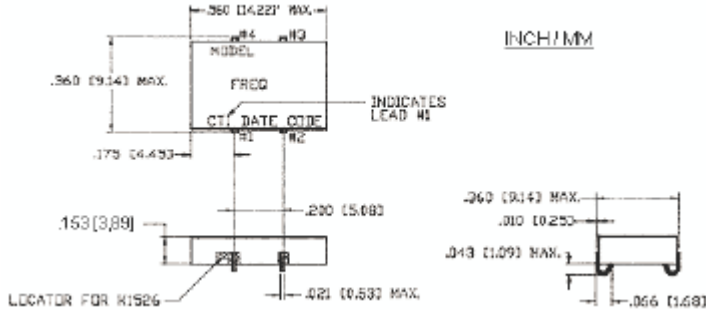
K1526AXX-R	-Specific Frequency
└─	“Blank” = $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ Operating Temp.
└─	“M” = $40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ Operating Temp
└─	Model Selection: See Table Above

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# K1526A Series

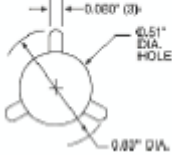
## 5V 9x14mm Surface Mount Voltage Controlled Crystal Oscillator



### TAPE & REEL SPECIFICATIONS

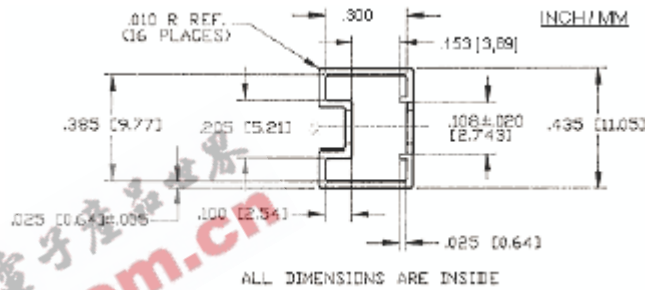
**Tape & Reel Shipping Tape**  
 Size: 24mm  
 Material: Black PVC, Conductive .012" thick

**13" Reel**  
 Tape Length: 16.5 yds  
 Max. No. of Pockets: 750  
 Leader Length: 16" min.  
 Trailer Length: 14" min.  
 Q.C. Sample Quantity: 10 pcs.  
 Product/Reel: 500  
 Cover Tape Thickness: .002"  
 Cover Peel Strength: 75g  
 Note: Minimum Order is 500

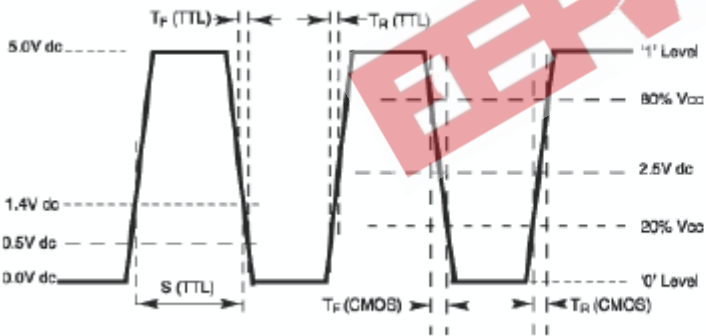


PIN	FUNCTION
1	Voltage Control
2	Gnd & Ground Plane
3	Output
4	+V <sub>CC</sub>

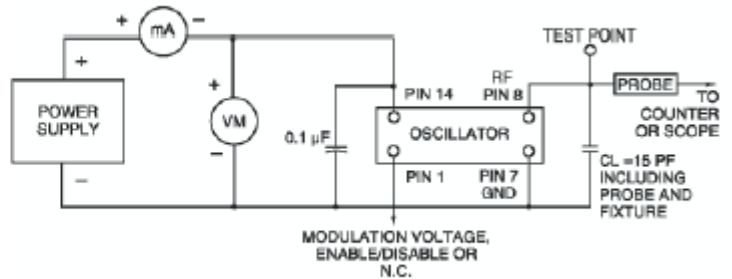
### SHIPPING TUBE CROSS SECTION



### OUTPUT WAVEFORM



### TEST CIRCUIT DIAGRAM



MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS		
TEST METHODS	REFERENCE PROCEDURES	DESCRIPTION
Temperature Cycle	MIL-STD-833, Mtd 1010, Cond. B	-55°C to +125°C; Air-to-Air, 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-883, Mtd 2002, Cond. B	1500 g's
Vibration	MIL-STD-883, Mtd 2007, Cond. B	20-2000 Hz; 0.06 inch; 15g'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 & 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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