

5V 9x14mm Surface Mount Voltage Controlled Crystal Oscillators

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 4.5V Control Voltage
- ± 25 ppm Stability
- -40°C to 85°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



ELECTRICAL SPECIFICATIONS

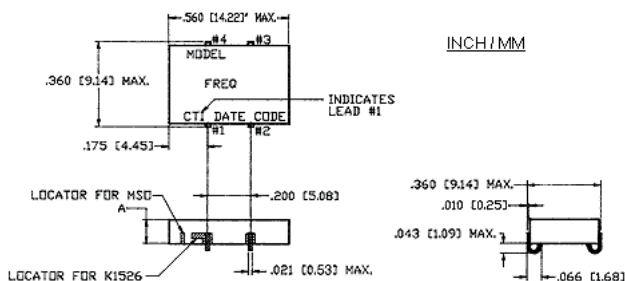
MODEL	K1526DA		K1526DD
Frequency Range (MHz)	2 to 33	33.1 to 40	2 to 40
Frequency Stability (ppm)			
Overall	Inclusive of calibration, temperature, voltage, load, shock, vibration, aging		
0°C to 70°C	± 25		
-40°C to +85°C	± 50		
Frequency Control Function:	(for custom deviation range, Vc range, transfer function, etc. -- consult factory)		
Deviation (ppm)			
Minimum	± 100		± 80
Maximum	± 150		± 120
Linearity	<5%	<10%	<5%
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	>50 K Ω @ 10 KHz		
Temperature Range (°C)			
Operating	-40°C to +85°C		
Storage	-40°C to +125°C		
Supply Voltage (V)	+5.0 $\pm 10\%$		
Input Current (mA)	<26		
Start Up Time (ms)	<10		
Symmetry (%) TTL	45/55		
Symmetry (%) CMOS	<33 MHz 45/55; ≥ 33 MHz 40/60		
Start up Time (ms)	<10		
Typical SSB Phase Noise (dBc/Hz)	10Hz		-65
Offset from Carrier	100Hz		-95
	1KHz		-120
	10KHz		-140
	100KHz		-150

PART NUMBERING GUIDE

K1526DX X - Specify Frequency

- "Blank" = 0°C to 70°C Operating Temp.
- "M" = -40°C to +85°C Operating Temp.
- Model Selection: See Table Above

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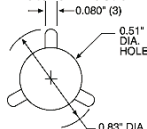


PIN	FUNCTION
1	Voltage Control
2	Gnd & Ground Plane
3	Output
4	+ V _{CC}

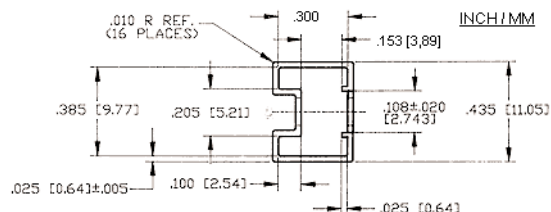
TAPE & REEL SPECIFICATIONS

Tape & Reel
Shipping Tape
 Size: 24mm
 Material: Black PVC,
 Conductive .012" thick
Shipping Reel
 Size: 13" diameter
 Material: Plastic

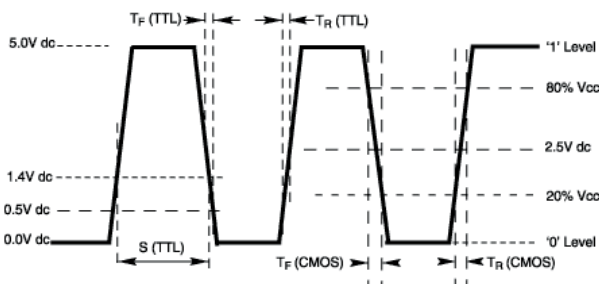
13" Reel
 Tape Length: 16.5 yds
 Max. No. of Pockets: 750
 Leader Length: 16" min.
 Trailer Length: 14" min.
 Q.C. Sample Quantity: 10 pcs.
 Product/Reel: 500
 Cover Tape Thickness: .002"
 Cover Peel Strength: 75g
 Note: Minimum Order is 500



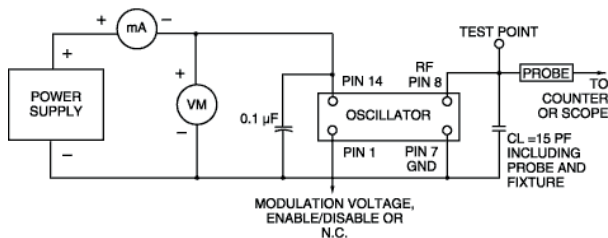
SHIPPING TUBE CROSS SECTION



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 ⁻⁸ atmos. CC/sec He
Resistance to Soldering	MIL-STD-202, Mtd 210D, Cond. J	235°C; 30 seconds
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