

# K1526D Series

## 9x14 mm, 5.0 Volt, CMOS/TTL, VCXO



- Former **Champion** Product
- Phase-Locked Loops (PLL's), Clock Recovery, Reference Signal Tracking, Synthesizers, Frequency Modulation/Demodulation

### Ordering Information

**00.0000 MHz**

**K1526D X X -R**

Product Series ————

Model Selection ————

    A: ±100 - ±150 ppm Pull\*

    D: ±80 - ±130 ppm Pull\*

Temperature Range ————

    Blank: 0°C to +70°C

    M: -40°C to +85°C

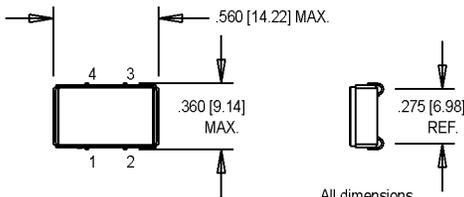
RoHS Compliance ————

    Blank: non-RoHS compliant part

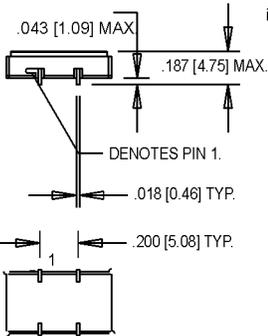
    -R: RoHS compliant part

    Frequency (customer specified)

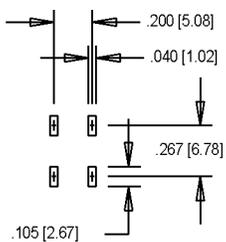
\* Above 40 MHz, pull is ±100 ppm or ±80 ppm minimum (no maximum)



All dimensions in inches [mm].



SUGGESTED SOLDER PAD LAYOUT



### Pin Connections

PIN	FUNCTION
1	Voltage Control
2	Ground & Gnd Plane
3	Output
4	+Vdd

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
Frequency Range	F	2		40	MHz		
Operating Temperature	T <sub>A</sub>	(See ordering information)					
Storage Temperature	T <sub>S</sub>	-40		+125	°C		
Frequency Stability Overall	ΔF/F	Inclusive of Calibration, Temperature, Voltage, Load, and Aging					
0°C to +70°C				±25	ppm		
-40°C to +85°C				±50	ppm		
Aging 1 <sup>st</sup> Year		-3		+3	ppm		
Thereafter (per year)		-1		+1	ppm		
Pullability/APR		(See ordering information)					
Control Voltage	V <sub>C</sub>	0.5	2.5	4.5	V		
Linearity				5	%	Positive Monotonic Slope	
2.000 to 33.000 MHz				10	%		
33.001 to 160.000 MHz							
Modulation Bandwidth	f <sub>m</sub>	20			KHz	±3dB	
Input Impedance	Z <sub>in</sub>	50k			Ohms	@ 10 kHz	
Input Voltage	V <sub>DD</sub>	4.5	5.0	5.5	V		
Input Current	I <sub>DD</sub>			26	mA		
Output Type						HCMOS/TTL	
Load		5 TTL or 15 pF HCMOS				See Note 1	
Symmetry (Duty Cycle)						See Note 2	
TTL & CMOS < 33 MHz		45		55	%		
CMOS ≥ 33 MHz		40		60	%		
Logic "1" Level	V <sub>OH</sub>	4.5			V		
Logic "0" Level	V <sub>OL</sub>			0.5	V		
Output Current				±16	mA		
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>			4	ns		
Start up Time				10	ms		
Phase Jitter @ 26 MHz	φ <sub>J</sub>		4		ps RMS	Integrated 12 kHz – 20 MHz	
Phase Noise (Typical) @ 26 MHz		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
		-65	-95	-115	-130	-140	dBc/Hz
Mechanical Shock		Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)					
Vibration		Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Hermeticity		Per MIL-STD-202, Method 112, (1x10 <sup>-8</sup> atm. cc/s of Helium)					
Thermal Cycle		Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles)					
Solderability		Per EIAJ-STD-002					
Soldering Conditions		+240°C max. for 10 secs.					

1. TTL load – see load circuit diagram #1. HCMOS load – see load circuit diagram #2.
2. Symmetry is measured at 1.4 V with TTL load, and at 50% V<sub>DD</sub> with HCMOS load.

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

Please see [www.mtronpti.com](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.