

# K1526C & K1536C

## 9x11 mm, 5.0 or 3.3 Volt, CMOS/TTL, VCXO



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

**Ordering Information**

00.0000 MHz

K15X6CX X X

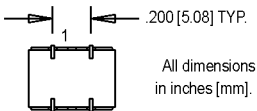
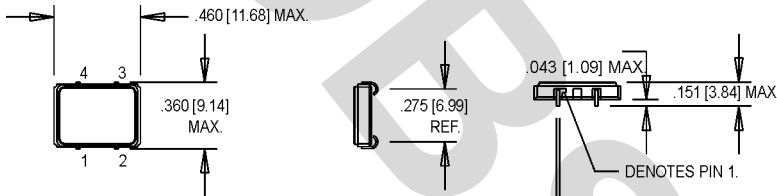
**Product Series**  
 K1526C = 5.0 Volt  
 K1536C = 3.3 Volt

**Model Selection:**  
 See Electrical Specs

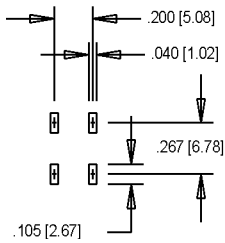
**Temperature Range**  
**Blank:** 0°C to +70°C  
**M:** -40°C to +85°C

**Symmetry/Logic Compatibility**  
**Blank:** TTL/CMOS 40%/60%  
**C:** CMOS 45%/55%  
**T:** TTL 45%/55%

**Frequency (customer specified)**



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	
<b>Model</b>		K1526CA	K1526CD	K1526CE			
		K1536CA	K1536CD				
<b>Frequency Range</b>	F	2 to 55	55.1 to 80	2 to 55	2 to 40	MHz	
<b>Frequency Stability</b>	$\Delta F/F$	inclusive of Calibration, Temperature, Voltage, Load, and Aging					
Overall		±25	±40	±25	±32	ppm	
0°C to +70°C		±50	±60	±50	±50	ppm	
-40°C to +85°C							
<b>Pullability</b>							
Minimum		±100	±80	±80	±200	ppm	
Maximum		±150	±160	±130		ppm	
<b>PARAMETER</b>	<b>Symbol</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Units</b>	<b>Condition/Notes</b>	
<b>Operating Temperature</b>	T <sub>A</sub>	(See ordering information)					
<b>Storage Temperature</b>	T <sub>s</sub>	-40		+125	°C		
<b>Aging</b>							
1 <sup>st</sup> Year		-3/-5		+3/+5	ppm	<52 MHz / ≥52 MHz	
Thereafter (per year)		-1/-2		+1/+2	ppm	<52 MHz / ≥52 MHz	
<b>Control Voltage</b>	V <sub>c</sub>	0.5	2.5	4.5	V	K1526C	
		0.3	1.65	3.0	V	K1536C	
		0		5.0	V	K1526CE	
<b>Linearity</b>				10	%	Positive Monotonic Slope	
<b>Modulation Bandwidth</b>	f <sub>m</sub>	20			kHz	+3 dB	
<b>Input Impedance</b>	Z <sub>in</sub>	50K			Ohms	@ 10 kHz	
<b>Input Voltage</b>	V <sub>dd</sub>	4.5	5.0	5.5	V	K1526C	
		3.0	3.3	3.6	V	K1536C	
<b>Input Current</b>	I <sub>dd</sub>			30	mA		
<b>Output Type</b>						CMOS/TTL	
<b>Load</b>				15	pF	HCMOS	
<b>Symmetry (Duty Cycle)</b>		(See ordering information)					
<b>Logic "1" Level</b>	V <sub>oh</sub>	V <sub>dd</sub> -0.5			V		
<b>Logic "2" Level</b>	V <sub>ol</sub>			0.5	V		
<b>Output Current</b>			20		mA		
<b>Rise/Fall Time</b>	T <sub>r</sub> /T <sub>f</sub>			5	ns	20% to 80% V <sub>dd</sub> , CL = 15 pF	
<b>Start up Time</b>				10	ms		
<b>Phase Jitter @ 26 MHz</b>	φ <sub>J</sub>		4		ps RMS	Integrated 12 kHz – 20 MHz	
<b>Phase Noise (Typical) @ 26 MHz</b>		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
		-65	-95	-115	-130	-140	dBc/Hz
<b>Mechanical Shock</b>		Per MIL-STD-202, Method 213, Condition C (100 g's, 6ms duration, ½ sine wave)					
<b>Vibration</b>		Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
<b>Hermeticity</b>		Per MIL-STD-202, Method 112, (1x10 <sup>-8</sup> atm. cc/s of Helium)					
<b>Thermal Cycle</b>		Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles)					
<b>Solderability</b>		Per EIAJ-STD-002					
<b>Soldering Conditions</b>		+240°C max. for 10 secs.					

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# MtronPTI Lead Free Solder Profile

