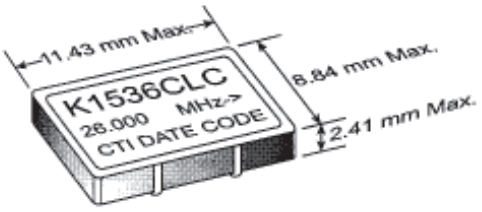
K1536CLC Series

3.3V 9x11mm 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 80 MHz Frequency Range
- 0.3V to 3.3V Control Voltage
- ±25ppm Stability (Typical)
- -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	K1536CLC	
Frequency Range (MHz)	2 to 55	55.1 to 80
Frequency Stability (ppm)		
Overall (Typical)	Inclusive of calibration, temperature, voltage, load, shock,vibration, aging	
0°C to 70°C	±25	±40
-40°C to +85°C	±50	±60
Frequency C Funct	(for cu TL, V nge, tran	su
Devia (Typic	±12	±100
Minim Tuning mit C to C	±60	±40
Minimu Tuni mit 0°C to °C	±5	±20
Linearity	<10%	
Modulation Bandwidth (±3dB)	>20 KHz	
Nominal Control Voltage (V)	1.65	
Control Voltage Range (V)	0.3 to 3.0	
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)	+3.3 ±10%	
Input Current (mA)	<30	
Start Up Time (ms)	<10	
Symmetry (%) CMOS	40/60	
Start up Time (ms)	<10	
Typical SSB Phase Noise (dBc/Hz)	10Hz	-65
Offset from Carrier	100Hz	-95
	1KHz	-115
	10KHz	-130
	100KHz	-140

PART NUMBERING GUIDE

K1536CLC X X - Specify Frequency

- "Blank" = CMOS 40%/60%
- "C" = CMOS 45%/55%
- "Blank" = 0°C to 70°C Operating Temp.
- "M" = -40°C to +85°C Operating Temp.

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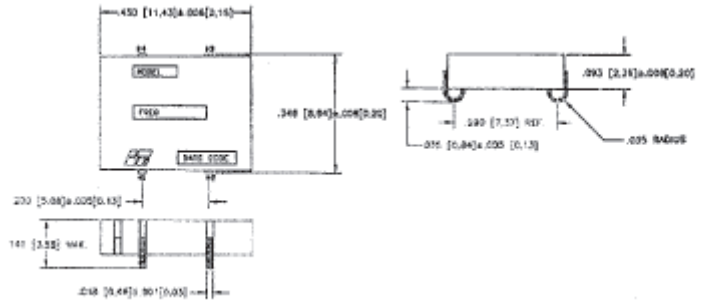


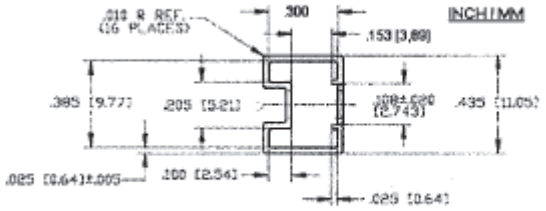
PIN	FUNCTION
1	Voltage Control
2	Gnd & Ground Plane
3	Output
4	+ V_{CC}

TAPE & REEL SPECIFICATIONS

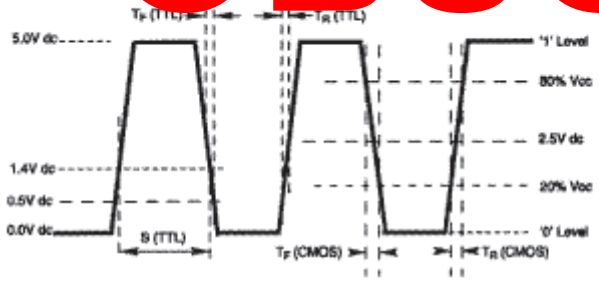
Tape & Reel
Shipping Tape
Size: 24mm
Material: Black PVC, Conductive .012" thick
Shipping Reel
Size: 13" diameter
Material: Plastic

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

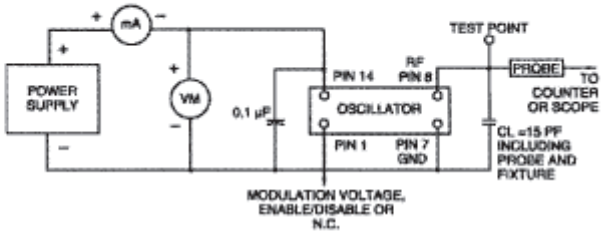
SHIPPING TUBE CROSS SECTION



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