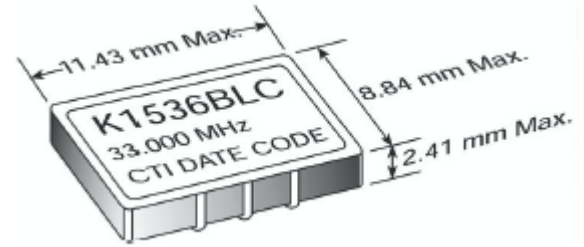


K1536BLC Series

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
- ± 25 ppm Stability (Typical)
- -40°C to $+85^{\circ}\text{C}$ Operating Temperature Option
- Tape and Reel Available
- Ground Shielded Top and Bottom
- 6-pin SOJ-20 Footprint
- J-Leads Seam-sealed, Resistance Welded Hermetic Package



ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS	
Model	K1536BLC
Frequency Range (MHz)	2 to 55 55.1 to 80
Frequency Stability (ppm)	
Overall (Typical)	Inclusive of Calibration, Temperature, Voltage, Load, Shock, Vibration, and Aging
0°C to +70°C	± 25 ± 40
-40°C to +85°C	± 50 ± 60
Frequency Control Function	(For Custom MTL, Vc Range, transfer function, etc. – Consult Factory)
Deviation (Typical)	± 120 ± 100
Minimum Tuning Limit 0°C to 70°C	± 60 ± 40
Minimum Tuning Limit -40°C to 85°C	± 50 ± 20
Linearity	<10%
Modulation Bandwidth ($\pm 3\text{dB}$)	>20KHz
Nominal Control Voltage (V)	1.65
Control Voltage Range (V)	0.3 to 3.0
Transfer Function	Positive
Input Impedance	> 50K Ω @ 10KHz
Temperature Range (°C)	
Operating	-40°C to +85°C
Storage	-40°C to +125°C
Supply Voltage (V)	+3.3V $\pm 10\%$
Input Current (mA)	<30
Start Up Time (ms)	<10
Symmetry (%) TTL/CMOS	40/60
Typical SSB Phase Noise (dBc/Hz)	10Hz -65
Offset from Carrier	100Hz -95
	1KHz -115
	10KHz -130
	100KHz -140

PART NUMBERING GUIDE

K1536BLC X X

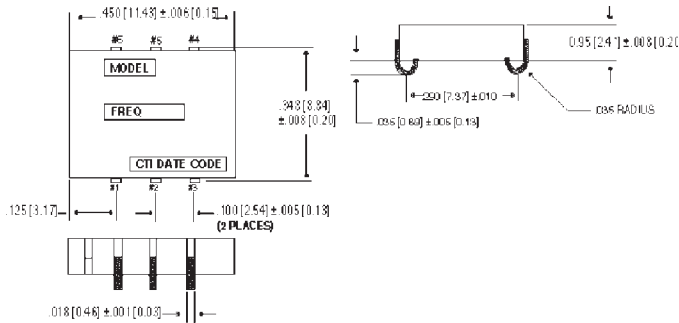
- Specific Frequency
- "Blank" = CMOS 40/60%
- "C" = CMOS 45/55%
- "Blank" = 0°C to +70°C Operating Temp.
- "M" = -40°C to +85°C Operating Temp.

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 for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

K1536BLC Series

3.3V 9x11 mm Surface Mount Voltage Controlled Crystal Oscillator

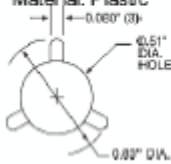


PIN	FUNCTION
1	Voltage Control
2	Tri-State
3	Gnd & Ground Plane
4	Output
5	N/C
6	+V _{CC}

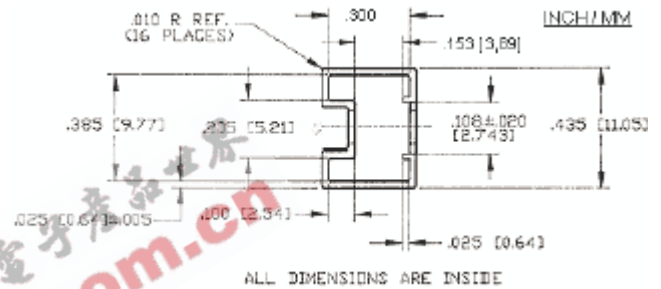
TAPE & REEL SPECIFICATIONS

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

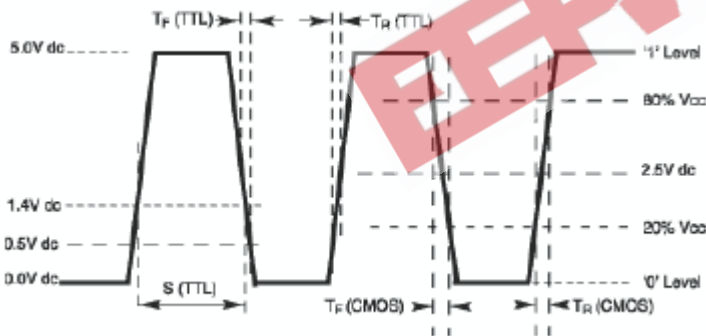
13" Reel
 Tape Length 16.5 yds
 Max. No. of Pockets: 750
 Leader Length: 16" min.
 Trailer Length: 14" min.
 Q.C. Sample Quantity: 10 pcs.
 Product/Reel: 500
 Cover Tape Thickness: .002"
 Cover Peel Strength: 75g
 Note: Minimum Order is 500



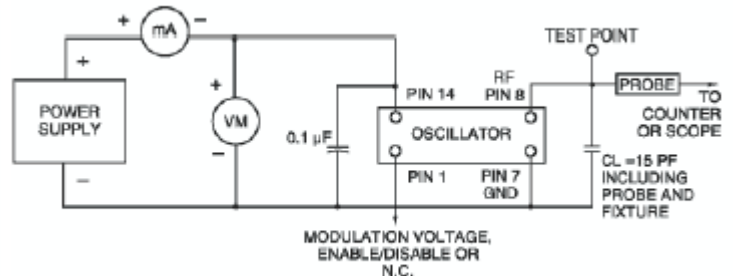
SHIPPING TUBE CROSS SECTION



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. 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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