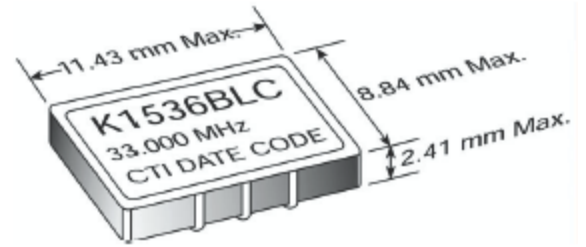


# K1536BLC Series

## 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
- $\pm 25$  ppm Stability (Typical)
- $-40^{\circ}\text{C}$  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

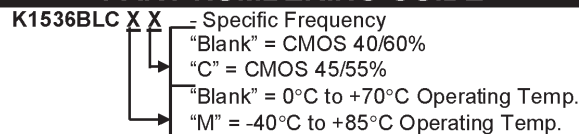


### ELECTRICAL SPECIFICATIONS

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
$0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$	$\pm 2$
$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$	$\pm 50$
Frequency Control Function	(For Custom Models, Voltage Range, Transfer Function, etc. - Consult Factory)
Deviation (Typical)	$\pm 120$ $\pm 100$
Minimum Tuning Limit $0^{\circ}\text{C}$ to $70^{\circ}\text{C}$	$\pm 60$ $\pm 40$
Minimum Tuning Limit $-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$	$\pm 50$ $\pm 20$
Linearity	$< 10\%$
Modulation Bandwidth ( $\pm 3\text{dB}$ )	$> 20\text{KHz}$
Nominal Control Voltage (V)	1.65
Control Voltage Range (V)	0.3 to 3.0
Transfer Function	Positive
Input Impedance	$> 50\text{K}\Omega @ 10\text{KHz}$
Temperature Range ( $^{\circ}\text{C}$ )	
Operating	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$
Storage	$-40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$
Supply Voltage (V)	$+3.3\text{V} \pm 10\%$
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

OBSOLETE

### PART NUMBERING GUIDE

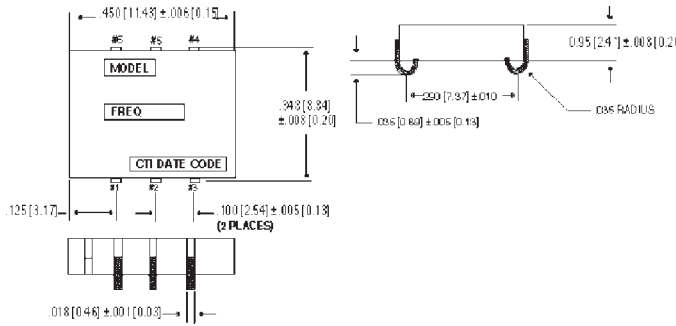


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# K1536BLC Series

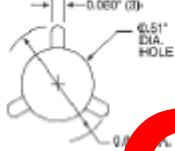
## 3.3V 9x11mm Surface Mount Voltage Controlled Crystal Oscillator



### TAPE & REEL SPECIFICATIONS

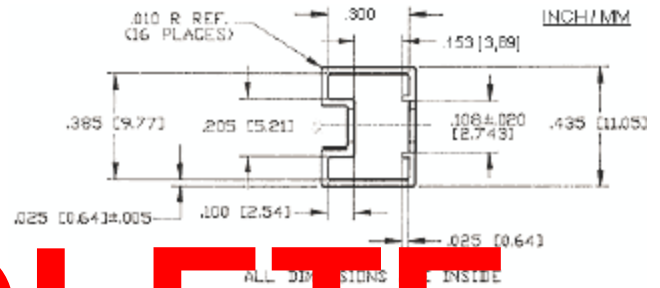
**Tape & Reel**  
**Shipping Tape**  
 Size: 24mm  
 Material: Black PVC,  
 Conductive .012" thick  
**Shipping Reel**  
 Size: 13" diameter  
 Material: Plastic

**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



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

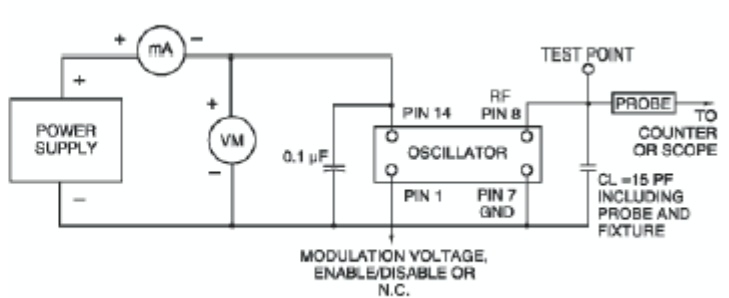
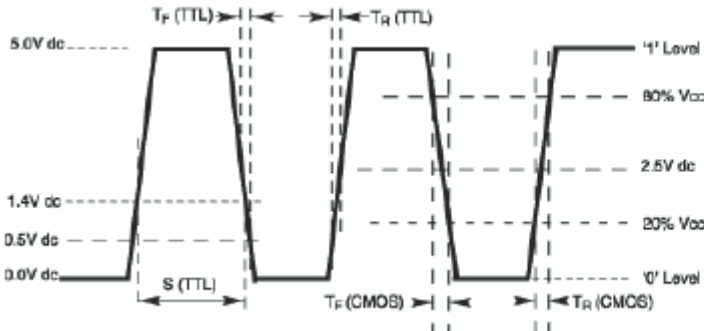
### SHIPPING TUBE CROSS SECTION



OBSOLETE

### 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 <sup>-8</sup> 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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