

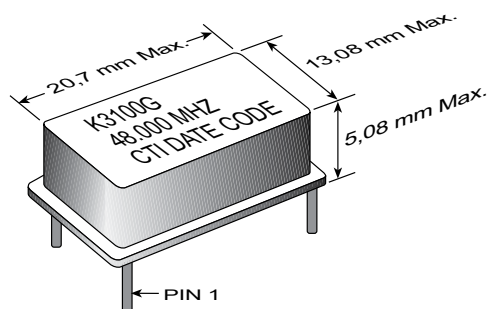
# K3100G Series

## 14 pin DIP, 5.0 Volt, Clock Oscillator



**THIS PRODUCT IS NOT RECOMMENDED FOR NEW DESIGNS.  
PLEASE REFER TO THE MHO3 PRODUCT SERIES.**

- TTL/CMOS Compatible
- Tight Symmetry (45/55%) Available
- Tri-State Option Available
- $\pm 100$ ppm Stability Standard - K3100GC
- Tighter Stabilities Available
- $\pm 25$ ppm Stability:- K3100GA
- $\pm 50$ ppm Stability:- K3100GB
- Case Ground for EMI Protection

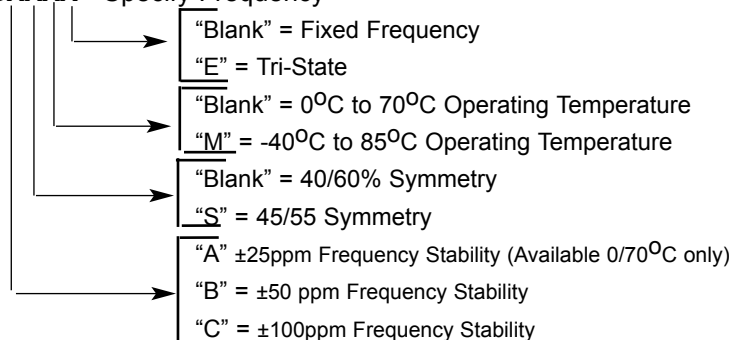


### ELECTRICAL SPECIFICATIONS

MODEL	K3100GA	K3100GB	K3100GC
Frequency Range (MHz)	1.0 to 125		
Frequency Stability (ppm)	Inclusive of calibration, temperature, voltage, load, shock, vibration, aging		
Overall	Inclusive of calibration, temperature, voltage, load, shock, vibration, aging		
0°C to 70°C	$\pm 25$	$\pm 50$	$\pm 100$
-40°C to 85°C	N/A	$\pm 50$	$\pm 100$
Temperature Range (°C)	-40°C to +85°C		
Operating	-40°C to +85°C		
Storage	-55°C to +125°C		
Supply Voltage (V)	+3.3 $\pm 5\%$		
Supply Current (mA)	<30		
Output CMOS			
"0" Level ( $V_{OL}$ )	0.9 $V_{CC}$		
"1" Level ( $V_{OH}$ )	0.1 $V_{CC}$		
Load	Up to 80MHz 50pF; >80MHz 30pF		
$T_R$ & $T_F$ (ns)	<10		
Symmetry (%)	40/60		
Jitter (Typical)	10ps RMS @ 100MHz		
Start up Time (ms)	<10		

### PART NUMBERING GUIDE

**K3100GXXXX** - Specify Frequency



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.

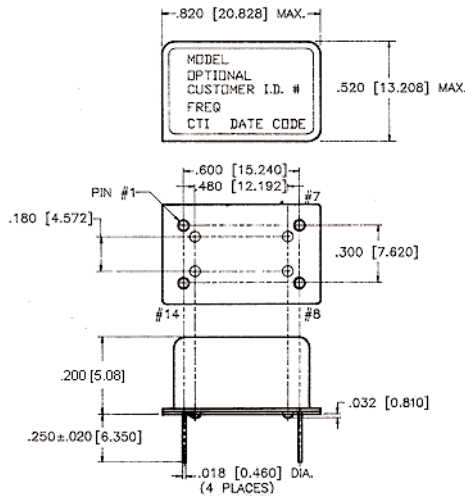
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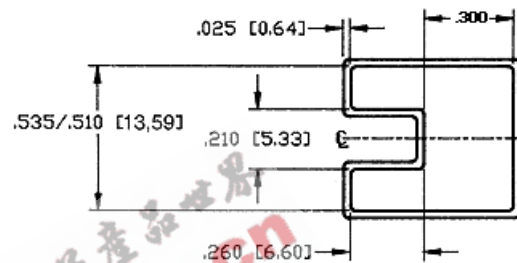


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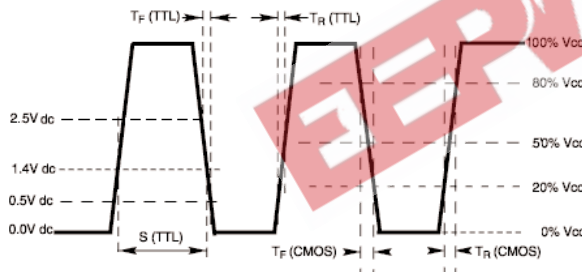
PIN	FUNCTION
1	N/C / Tri-State
7	Ground
8	Output
14	+ V <sub>CC</sub>

### SHIPPING TUBE CROSS SECTION

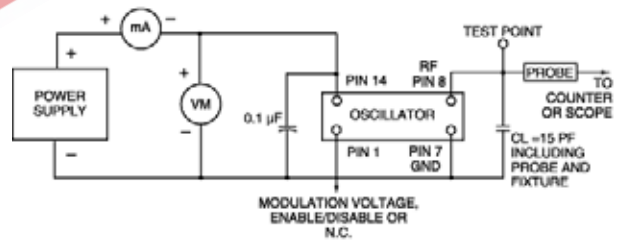


ALL DIMENSIONS ARE INSIDE

### 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. 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

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