

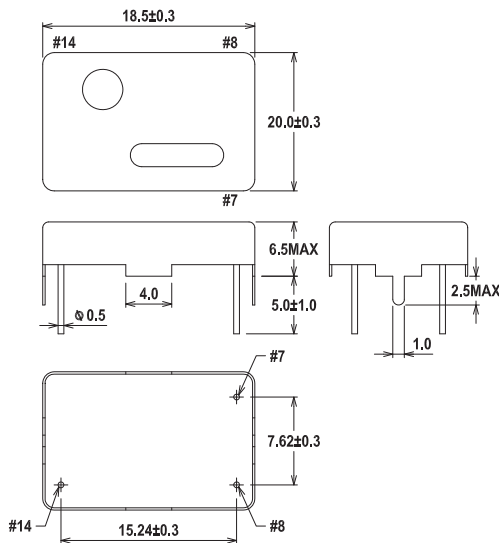
**◆ Application**

- Cellular Applications (GSM, TDMA, CDMA)
- GPS Devices
- Mobile and Portable Radio/Telephone Communications Transceivers
- Pb free product

**◆ Options**

- Carbon

**◆ Dimension(mm)**



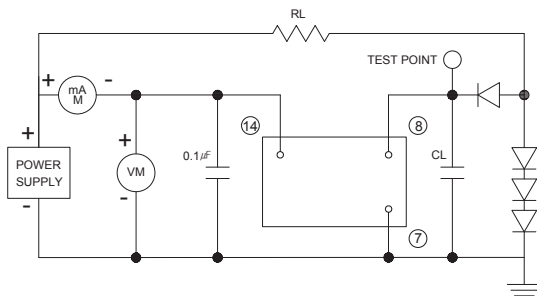
No.	Pin Connection
# 7	GND
# 8	Output
# 14	Vcc

**◆ Standard Specification**

(Nominal frequency referenced to frequency at 25 °C ± 2 °C)

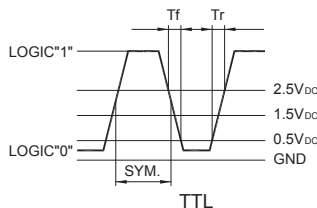
	MTD-T Serie
Logic Family	TTL
Frequency Range	8.000 MHz ~ 35.000 MHz
Frequency Stability	+/-5.0ppm, +/-2.5ppm, +/-2.0ppm
Pullability	+/-5ppm, +/-10ppm typ. (@Vcont = 2.5Vdc)
Operating Temp. Range	-40 °C ~ +85 °C, -30 °C ~ +75 °C, -20 °C ~ 70 °C
Storage Temp. Range	-55 °C ~ +125 °C
Input Voltage	+5.0 Vdc ± 5%
Input Current	15.0mA Max
Output Level	Symmetry : 40/60% max @ 1.5V Logic 0: 0.5V max Logic 1: 2.5V min Rise & Fall Times : 4ns max, 0.5 ~ 2.5V
Aging	+/- 1 ppm/year Max
Output Load	2TTL or 15pF
Phase Noise	-40 dBc/Hz max @ 1 Hz offset from carrier -80 dBc/Hz max @ 10 Hz -110 dBc/Hz max @ 100 Hz -135 dBc/Hz max @ 1 kHz -140 dBc/Hz max @ 10 kHz -145 dBc/hZ max @ 100 kHz

**◆ Test Circuit**



Note: CL Includes probe and fixture capacitance

**◆ Output Waveform**



**◆ Parts Number Guide**

Classification	Designators								Description	
Example	M	T	D	-	T	1	6	A	()	20.000 MHz (Frequency)
Logo	M									MDX
Package size		T								TCXO
Product			D							Dip type 18.5mm X 12.0mm
Output Level					T					TTL
Temperature Range						4	8			-40 °C ~ +85 °C
						3	8			-30 °C ~ +80 °C
						3	7			-30 °C ~ +75 °C
						2	7			-20 °C ~ +70 °C
						1	6			-10 °C ~ +60 °C
Frequency Stability									A	+/-2.0ppm
									B	+/-2.5ppm
									C	+/-5.0ppm
Supply Voltage									()	+5.0 Volt

Ref 2009-02b - All specifications are subject to change without notice