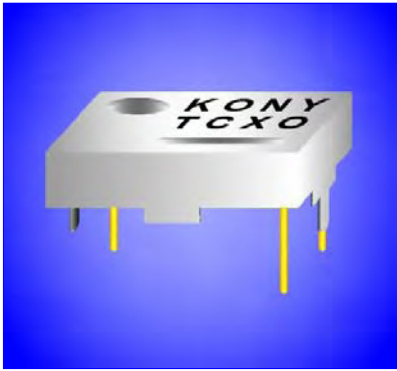




Temperature Compensated Crystal Oscillator



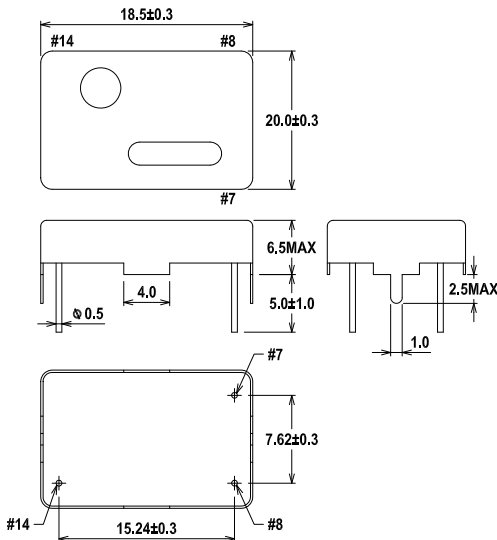
◆ Application

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

◆ Options

- Carbon

◆ Dimension(mm)



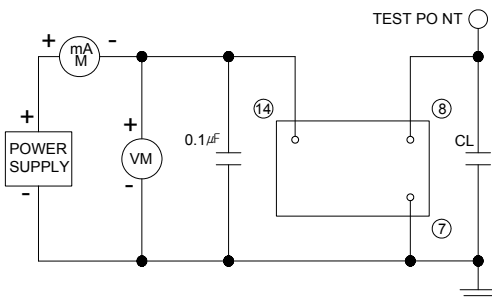
No.	Pin Connection
# 7	GND
# 8	Output
# 14	Vcc

◆ Standard Specification

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

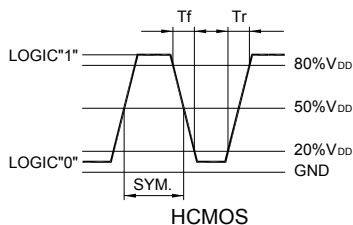
MTD-H Series	
Logic Family	HCMOS
Frequency Range	8.000 MHz ~ 35.000 MHz
Frequency Stability	+/-5.0ppm, +/-2.5ppm, +/-2.0ppm
Operating Temp. Range	-40°C ~ +85°C, -30°C ~ +75°C, -20°C ~ 70°C
Storage Temp. Range	-55°C ~ +125°C
Input Voltage	+ 3.3 Vdc ± 5%
Input Current	15.0mA Max
Output Level	Symmetry : 40/60% max @ 50% VDD Logic 0: 10% Vdd max Logic 1: 90% Vdd min Rise & Fall Times : 8ns max, 20~80%
Aging	+/- 1 ppm/year Max
Output Load	10Kohm//10pF, 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

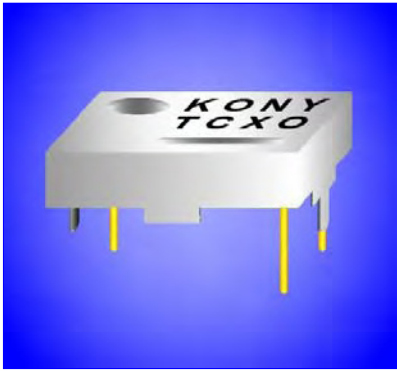


◆ Parts Number Guide

Classification	Designators								Description	
	M	T	D	-	H	1	6	A		()
Example	M									20.000 MHz (Frequency)
Logo	M									MDX
Package size		T								TCXO
Product			D							Dip type 18.5mm X 12.0mm
Output Level					H					HCMOS
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 Volt

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All specifications are subject to change without notice



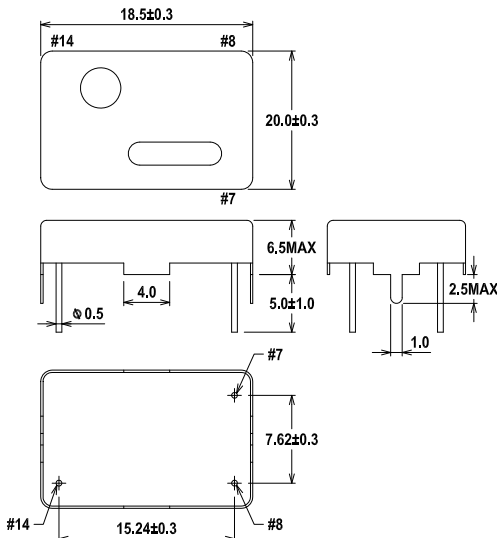
◆ Application

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

◆ Options

- Carbon

◆ Dimension(mm)



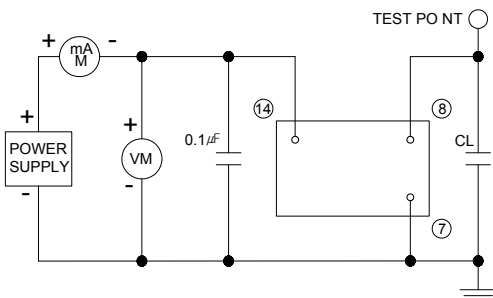
No.	Pin Connection
# 7	GND
# 8	Output
# 14	Vcc

◆ Standard Specification

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

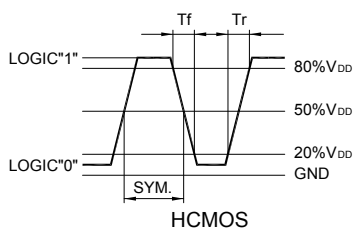
MTD-H3 Series	
Logic Family	HCMOS
Frequency Range	8.000 MHz ~ 35.000 MHz
Frequency Stability	+/-5.0ppm, +/-2.5ppm, +/-2.0ppm
Operating Temp.Range	-40°C ~ +85°C, -30°C ~ +75°C, -20°C ~ 70°C
Storage Temp.Range	-55°C ~ +125°C
Input Voltage	+ 3.3 Vdc ± 5%
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Output Level	Symmetry : 40/60% max @ 50% VDD Logic 0: 10% Vdd max Logic 1: 90% Vdd min Rise & Fall Times : 8ns max, 20~80%
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◆ Test Circuit



Note: CL Includes probe and fixture capacitance

◆ Output Waveform



◆ Parts Number Guide

Classification	Designators								Description	
	M	T	D	-	H	1	6	A		3
Example	M	T	D	-	H	1	6	A	3	20.000 MHz (Frequency)
Logo	M									MDX
Package size		T								TCXO
Product			D							Dip type 18.5mm X 12.0mm
Output Level					H					HCMOS
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						0	5			+0°C ~ +50°C
								A		+/-2.0ppm
								B		+/-2.5ppm
Supply Voltage								C		+/-5.0ppm
								3		+3.3 Volt

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