

M5002 Series

9x16 mm FR-4, 5.0 Volt, CMOS/TTL/PECL/LVDS, HPXO



- Ideal for applications requiring long term (20 year) all-inclusive stability

Ordering Information

M5002 2 8 R C K -R 00.0000 MHz

Product Series

Temperature Range
 1: 0°C to +70°C 2: -40°C to +85°C
 6: -20°C to +70°C 7: 0°C to +85°C

Stability
 6: ±25 ppm 8: ±20 ppm
 D: ±15 ppm E: ±10 ppm

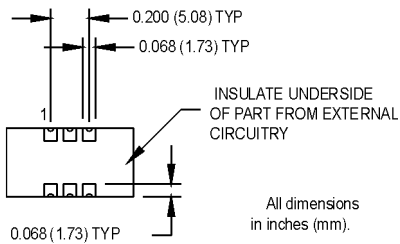
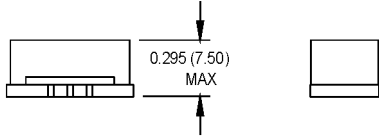
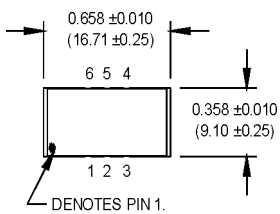
Output Type
 R: Complementary tristate (PECL/LVDS)
 T: Tristate (CMOS)

Symmetry/Logic Compatibility
 D: 45/55% CMOS/TTL L: 45/55% LVDS
 P: 45/55% PECL

Package/Lead Configurations
 K: FR-4, 6 Pad

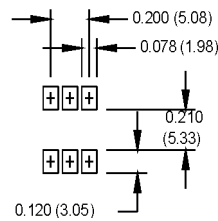
RoHS Compliance
 Blank: non-RoHS compliant part
 -R: RoHS compliant part

Frequency (customer specified)



All dimensions in inches (mm).

SUGGESTED SOLDER PAD LAYOUT



Pin Connections

PIN	FUNCTION
1	N/C
2	Tristate
3	Ground
4	Output 1
5	Output 2
6	+Vcc/Vdd

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	10		30	MHz	CMOS/TTL/PECL/LVDS
Operating Temperature	T _A	(See Ordering Information)				
Storage Temperature	T _s	-55		+105	°C	
Frequency Stability	ΔF/F	(See Ordering Information)				
Aging 1st Year				1.5	ppm	
Thereafter (per year)				0.5	ppm	
Input Voltage	V _{cc/Vdd}	4.75	5.0	5.25	V	
Input Current	I _{cc/Idd}	2		25	mA	CMOS/TTL
		50		75	mA	PECL
		5		35	mA	LVDS
Output Type						CMOS/TTL/PECL/LVDS
Load		2 TTL or 15 pF Max. 50 Ohms to V _{cc} -2 Volts 100 Ohm differential load				CMOS/TTL PECL LVDS
Symmetry (Duty Cycle)		(See Ordering Information)				
Output Skew				50	ps	PECL
Differential Voltage		250	375	500	mV	LVDS
Logic "1" Level	V _{oh}	4.5		4.1	V	CMOS/TTL
		3.9			V	PECL
		1.375			V	LVDS
Logic "0" Level	V _{ol}			0.5	V	CMOS/TTL
		3.1		3.4	V	PECL
				1.125	V	LVDS
Rise/Fall Time	T _r /T _f	2.0		10	ns	CMOS/TTL
		0.25		3.0	ns	PECL/LVDS
Tristate Function		Input Logic "1": output active Input Logic "0": output disables				Opposite tristate logic Available upon request
Start up Time		10			ms	
Phase Noise (Typical) @ 19.44 MHz		100 Hz -60	1 kHz -120	10 kHz -135	100 kHz -148	Offset from carrier dBc/Hz

1. Stability includes initial tolerance, deviation over temperature, supply and load variation, and aging for 20 years @ 25°C.

MtronPTI Lead Free Solder Profile

