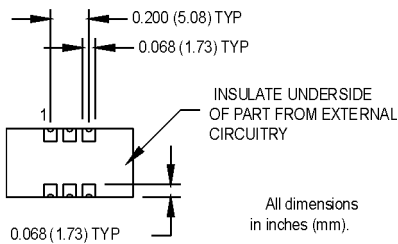
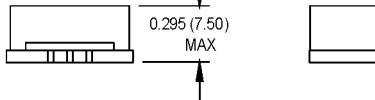
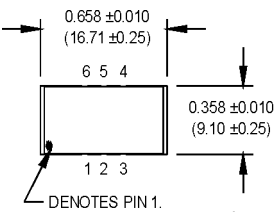


M5004 Series

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

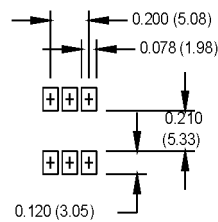


- Ideal for applications requiring long term (20 year) all-inclusive stability



All dimensions in inches (mm).

SUGGESTED SOLDER PAD LAYOUT



Pin Connections

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

Ordering Information

	M5004	2	0	R	1	P	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	0: Nominal per APR selection									
Output Type	R: Complementary tri-state (PECL/LVDS)									
	T: Tri-state (CMOS)									
Absolute Pull Range (APR)	1: ±25 ppm									
	2: ±15 ppm									
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)										

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
							Electrical Specifications
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)					See Note 1
Aging							
1st Year				1.5	ppm		
Thereafter (per year)				0.5	ppm		
Pullability/APR		(See Ordering Information)					Over Control Voltage
Control Voltage	V _c	0.5	2.5	4.5	V		
Tuning Range				15	ppm/V		
Modulation Bandwidth	f _m	10			kHz		
Input Impedance	Z _{in}	50K			Ohms		
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		4.1	V	PECL	
		1.375			V	LVDS	
Logic "0" Level	V _{ol}	3.1		0.5	V	CMOS/TTL	
				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	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier	
	-60	-90	-120	-135	-148	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

