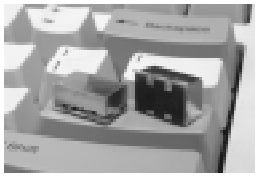
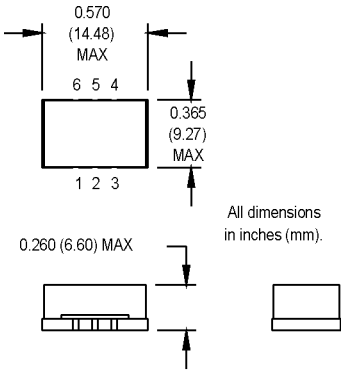
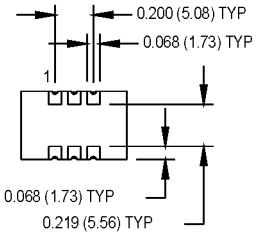
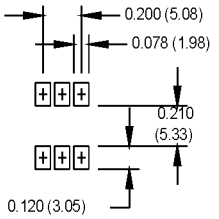
MXP Series 3.3 Volt FR-4 Based LVPECL/LVDS Compatible Surface Mount Oscillators







SUGGESTED SOLDER PAD LAYOUT



Ordering Information

MXP 1 3 R L F 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

Stability
- **3:** ±100 ppm
- **4:** ±50 ppm
- **6:** ±25 ppm
- **8:** ±20 ppm

Output Type
- **R:** Complementary Tri-state

Symmetry/Logic Compatibility
- **L:** 45/55% LVDS
- **P:** 45/55% PECL
- **H:** 40/60% LVDS
- **Q:** 40/60% PECL

Package/Lead Configurations
- **F:** FR-4, 6 Pin

Frequency (customer specified)

Pin Connections

PIN	FUNCTION
1	N/C
2	Tri-state
3	Ground
4	Output 1
5	Output 2
6	+Vcc

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	0.75		800	MHz	
	Frequency Stability	ΔF/F	(See Ordering Information)				See Note 1
	Operating Temperature	Ts	(See Ordering Information)				
	Storage Temperature	TA	-55		+125	°C	
	Input Voltage	Vcc	3.15	3.3	3.45	VDC	
	Input Current	Icc					
	0.75 MHz to 24 MHz				60/30	mA	PECL/LVDS
	24 MHz to 160 MHz				100/50	mA	PECL/LVDS
	160 MHz to 800 MHz				120/80	mA	PECL/LVDS
	Symmetry (Duty Cycle)		(See Ordering Information)				
	Load						See Note 2
	Rise/Fall Time	Tr/Tf			2	ns	PECL
					3	ns	LVDS
	Logic "1" Level	Voh	Vcc -0.9			VDC	PECL
			1.385	1.43	1.6	%	LVDS
	Logic "0" Level	Vol			Vcc -1.7	VDC	PECL
					1.6	%	LVDS
	Cycle to Cycle Jitter						1 Sigma
	@ 19.44 MHz			5	10	ps RMS	
	@ 38.88 MHz			7	12	ps RMS	
	@ 77.76 MHz			8	13	ps RMS	
	@ 155.52 MHz			10	15	ps RMS	
	@ 250.00 MHz			10	15	ps RMS	
	@ 622.08 MHz			10	15	ps RMS	
	Aging	< 2 ppm for first year < 1 ppm/year following the first year					
Environmental							
	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C					
	Vibration	Per MIL-STD-202, Method 201 & 204					
	Reflow Solder Conditions	240°C for 10 s max.					
	Solderability	Per EIAJ-STD-002					

1. Calibration, deviation over temperature, shock, vibration, and aging.
2. See load circuit diagram #5 on page 93.

M-tron Industries, Inc., PO Box 630, Yankton, SD 57078-0630, USA Phone: 605-665-9321 or 1-800-762-8800 Fax: 605-665-1709 Website: www.mtron.com
M-tron Industries Limited, 1104 Shanghai Industrial Investment Building, 48-62 Hennessy Road, Wanchai, Hong Kong, China Phone: 852-2866-8023 Fax: 852-2529-1822