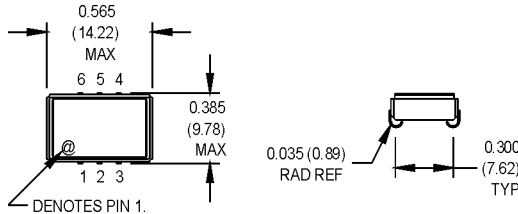


MPV5J Series

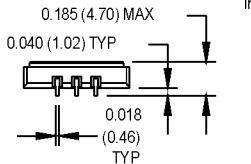
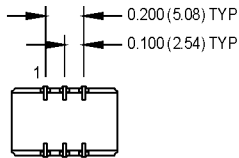
9x14 mm, 5.0 Volt, PECL/LVDS VCXO



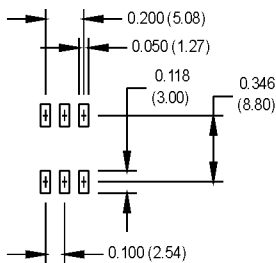
- Integrated phase jitter of less than 1 ps from 12 kHz to 20 MHz
- Ideal for low noise PLL applications



All dimensions in inches (mm).



SUGGESTED SOLDER PAD LAYOUT



Pin Connections

PIN	FUNCTION
1	Control Voltage
2	Output Enable or N/C
3	Ground/Case
4	Output Q
5	Output Q or N/C
6	+Vcc

Ordering Information

MPV5J	1	0	B	1	P	J	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	8: 0°C to +50°C						
Stability							
0: Nominal per APR selection							
Output Type							
B: Complementary, Enable (Enable High)							
S: Complementary, Enable (Enable Low)							
U: Complementary Output							
Absolute Pull Range							
1: ±50 ppm (±35 ppm typ. Stability)							
8: ±25 ppm (±50 ppm typ. Stability)							
Symmetry/Output Logic Type							
P: 45/55% PECL	Q: 40/60% PECL						
Package/Lead Configurations							
J: J-Lead							
Frequency (customer specified)							

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
	Frequency Range	F	30		800	MHz	(Consult factory for exact frequency availability)
	Frequency Stability	$\Delta F/F$	(See Ordering Information)				See Note 1
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vcc	4.75	5.0	5.25	V	
	Input Current	Idd		60	70	mA	
	Symmetry (Duty Cycle)		(See Ordering Information)				
	Load						See Note 2
	Rise/Fall Time	Tr/Tf		.35	.55	ns	@ 20/80% LVPECL
				.50	1.0	ns	@ 20/80% LVDS
	Logic “1” Level	Voh	Vcc -1.02			V	
	Logic “0” Level	Vol			Vcc -1.63	V	
	Phase Jitter	ϕJ					
	@ 77.76 MHz			0.6	0.9	ps RMS	Integrated 12 kHz - 20 MHz
	@ 155.52 MHz			0.3	0.55	ps RMS	Integrated 12 kHz - 20 MHz
	@ 622.08 MHz			0.25	0.5	ps RMS	Integrated 12 kHz - 20 MHz
	Phase Noise (Typical)	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	Offset from carrier
	@ 77.76 MHz	-80	-110	-133	-144	-147	dBc/Hz
	@ 155.52 MHz	-80	-110	-133	-144	-147	dBc/Hz
@ 622.08 MHz	-70	-100	-125	-135	-137	dBc/Hz	
Modulation Bandwidth	fm	10			Khz	-3 dB bandwidth	
Input Impedance	Zin	50			K Ω		
Control Voltage	Vcc	0		5.0	V	Pin 1 voltage	
Center Frequency	Vc0		2.5		V		
Linearity			5	10	%		
Pullability	APR	(See Ordering Information)				See Note 3	
Enable/Disable Logic		CMOS high, Vcc or N/C - enables output				Output Option B	
		CMOS low or GND - disables output					
		PECL low, GND, or N/C - enables output				Output Option S	
		PECL high - disables output					
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., or 230°C for 90 s max.					
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁸ atm.cc/s of helium)					
	Solderability	Per MIL-STD-883, Method 2003					

1. Stability given for deviation over temperature.

2. PECL load - see load circuit diagram #5.

3. APR specification inclusive of initial tolerance, deviation over temperature, shock, vibration, supply voltage, and aging.

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

Please see www.mtronpti.com for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

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