

# MPV5 Series

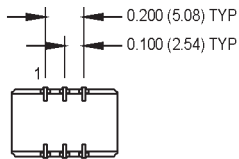
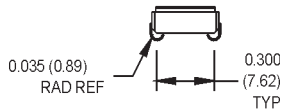
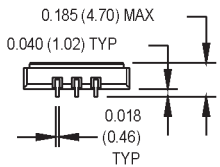
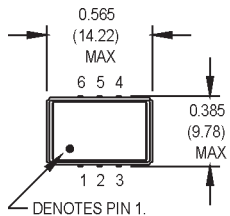
## 9x14 mm, 5.0 Volt, PECL, VCXO



- LVDS and PECL Output Logic With Good Integrated Jitter Performance (5 ps)
- Phase-Locked Loops (PLL's), Clock Recovery, Reference Signal Tracking, Synthesizers, Frequency Modulation/Demodulation

Ordering Information		00.0000 MHz	
Product Series	MPV5	1	0
Temperature Range	1: 0°C to +70°C	2: -40°C to +85°C	6: -20°C to +70°C
Stability	0: Nominal per APR selection		
Output Type	R: Complementary, Tri-state	Z: Complementary, Non Tri-state	T: Single, Tri-state
Absolute Pull Range	1: ±50 ppm (±35 ppm typ. Stability)	2: ±100 ppm (±20 ppm typ. Stability)	5: ±80 ppm (±25 ppm typ. Stability)
Symmetry/Output Logic Type	P: 45/55% PECL	Q: 40/60% PECL	
Package/Lead Configurations	J: J-lead		
Frequency (customer specified)			

# OBSOLETE

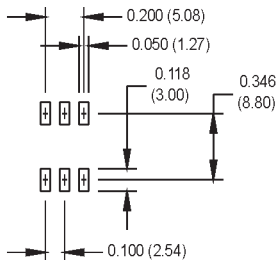


All dimensions in inches (mm).

### Pin Connections

PIN	FUNCTION
1	Control Voltage
2	Tri-state or N/C
3	Ground/Case
4	Output Q
5	Output $\bar{Q}$ or N/C
6	+Vcc

### SUGGESTED SOLDER PAD LAYOUT



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## 9x14 mm, 5.0 Volt, PECL, VCXO



PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
Frequency Range	F	0.75		800	MHz	See Note 1	
Frequency Stability	$\Delta F/F$	(See Ordering Information)					See Note 2
Operating Temperature	Ts	-40		+85	°C	See ordering info.	
Storage Temperature	Ta	-55		+125	°C		
Input Voltage	Vcc	4.75	5.0	5.25	V		
Input Current	Idd						
0.75 MHz to 24 MHz				60	mA		
24 MHz to 160 MHz				100	mA		
160 MHz to 800 MHz				120	mA		
Symmetry (Duty Cycle)		40	50	60	%	@ Vcc -1.3 VDC	
Load						See Note 3	
Rise/Fall Time	Tr/Tf		.35	.55	ns	@ 20/80%	
Logic Level	Vol			Vcc -1.63			
Cycle time			5		ns RMS	Sigma	
@ 38.88 MHz							
@ 155.52 MHz							
@ 622.08 MHz			10	20	ps RMS		
Phase Jitter	$\phi J$					Integrated 12 kHz - 20 MHz	
@ 38.88 MHz			.3	.5	ps RMS		
@ 155.52 MHz			3	5	ps RMS		
@ 622.08 MHz			3	5	ps RMS		
Peak to Peak Jitter (+/-)	Tj					@ BER 1E-12	
@ 38.88 MHz			2.1	3.5	ps RMS		
@ 155.52 MHz			21	35	ps RMS		
@ 622.08 MHz			21	35	ps RMS		
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
@ 38.88 MHz		-65	-97	-127	-143	-153	dBc/Hz
@ 155.52 MHz		-50	-80	-112	-128	-125	dBc/Hz
@ 622.08 MHz		-50	-80	-110	-123	-120	dBc/Hz
Modulation Bandwidth	fm			10k	Hz	-3 dB bandwidth	
Input Impedance	Zin	50			K $\Omega$		
Control Voltage	Vcc	0.5	2.5	5	V	Pin 1 voltage	
Center Frequency	Vc0		2.5		V		
Linearity			5	10	%		
Pullability	APR	(See Ordering Information)					See Note 4
Tri-state Output "On"	OE	2.8			V	Pin 2 voltage	
Tri-state Output "Off"	OE			0.6	V	Pin 2 voltage	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C						
Vibration	Per MIL-STD-202, Method 201 & 204						
Reflow Solder Conditions	See "Figure 2" on page 147						
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-3</sup> atm.cc/s of helium)						
Solderability	Per MIL-STD-883, Method 2003						

OBSOLETE

VCXO

1. Frequencies above 70 MHz utilize a PLL design. Fundamental and PLL designs are available for other frequencies. Contact factory.
2. Stability is given for deviation over temperature.
3. PECL load - see load circuit diagram #3 on page 148.
4. APR specification inclusive of initial tolerance, deviation over temperature, shock, vibration, supply voltage, and aging.

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