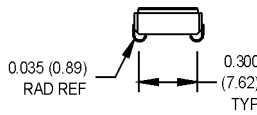
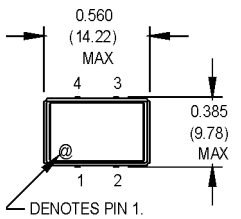


MVS Series

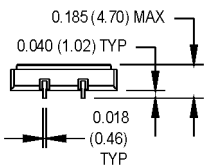
9x14 mm, 5.0 Volt, HCMOS/TTL, VCXO



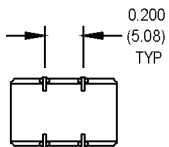
- General purpose VCXO for Phase Lock Loops (PLL), Clock Recovery, Reference Signal Tracking and Synthesizers
- Frequencies up to 160 MHz and tri-state option



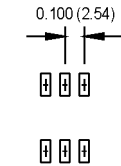
OPTIONAL 6-PIN PACKAGE WITH TRISTATE



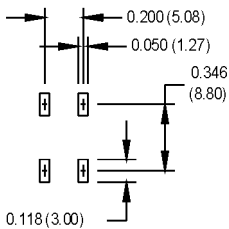
0.100 (2.54) TYP



All dimensions in inches (mm).



SUGGESTED SOLDER PAD LAYOUT



Pin Connections

FUNCTION	4 Pin Pkg.	6 Pin Pkg.
Control Voltage	1	1
Tristate		2
Circuit/Case Ground	2	3
Output	3	4
N/C		5
+Vdd	4	6

Ordering Information

Product Series	MVS	1	3	V	2	C	J	-R	00.0000	MHz	
Temperature Range	1: 0°C to +70°C		2: -40°C to +85°C		3: -20°C to +70°C						
Stability	1: ±1000 ppm		2: ±500 ppm		3: ±100 ppm		4: ±50 ppm		5: ±35 ppm		6: ±25 ppm
*8: ±20 ppm											
Output Type	V: Voltage Controlled					T: Tristate					
Pull Range (Vc = .5 to 4.5 V)	1: ±50 ppm min.										
	2: ±100 ppm min. (Up to 70.000 MHz)										
Symmetry/Logic Compatibility	A: 40/60 CMOS/TTL					C: 45/55 HCMOS					
Package/Lead Configurations	J: J Lead										
RoHS Compliance	Blank: non-RoHS compliant part										
	-R: RoHS compliant part										
Frequency (customer specified)											

*Contact factory for availability.

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
							Electrical Specifications
Frequency Range	F	1.544		160	MHz	See Note 1	
Operating Temperature	Ta	(See Ordering Information)					
Storage Temperature	Ts	-55		+125	°C		
Frequency Stability	ΔF/F	(See Ordering Information)					
Aging							
1st Year		-3/-5		+3/+5	ppm	< 52 MHz / ≥ 52 MHz	
Thereafter (per year)		-1/-2		+1/+2	ppm	< 52 MHz / ≥ 52 MHz	
Pullability/APR		(See Ordering Information)					Over control voltage
Control Voltage	Vc	0.5	2.5	4.5	V		
Linearity				10	%	Positive Monotonic Slope	
Modulation Bandwidth	fm	10			kHz		
Input Impedance	Zin	50k			Ohms		
Input Voltage	Vdd	4.75	5.0	5.25	V		
Input Current	Idd		25	35	mA	1.544 to 24.999 MHz	
			35	60	mA	25 to 69.999 MHz	
			55	90	mA	70 to 160 MHz	
Output Type						HCMOS/TTL	
Load						See Note 2	
1.544 to 60 Mhz		10 TTL or 50 pF					
60.001 to 160 MHz		5 TTL or 30 pF					
Symmetry (Duty Cycle)		(See Ordering Information)					See Note 3
Logic "1" Level	Voh	90% Vdd			V	HCMOS load	
		Vdd -0.5			V	TTL Load	
Logic "0" Level	Vol			10% Vdd	V	HCMOS load	
				0.5	V	TTL load	
Rise/Fall Time	Tr/Tf		3	10	ns	See Note 4	
Tristate Function		Input Logic "1" or floating: output active					
		Input Logic "0": output disables to high-Z					
Start up Time			4		ms		
Phase Jitter @ 155.52 MHz	φ J		10	15	ps RMS	Integrated 12 kHz - 20 MHz	
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	
@ 155.52 MHz		-62	-93	-113	-115	-114	
						dBc/Hz	

1. Frequencies above 90 MHz utilize a PLL design. Fundamental and PLL designs are available at other frequencies. Contact factory.
2. TTL load - see load circuit diagram #1. HCMOS load - see load circuit diagram #2.
3. Symmetry is measured at 1.4 V with TTL load, and at 50% Vdd with HCMOS load.
4. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% Vdd and 90% Vdd with HCMOS load.

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.