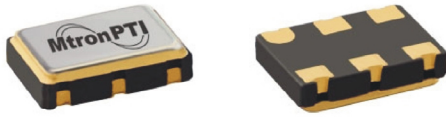
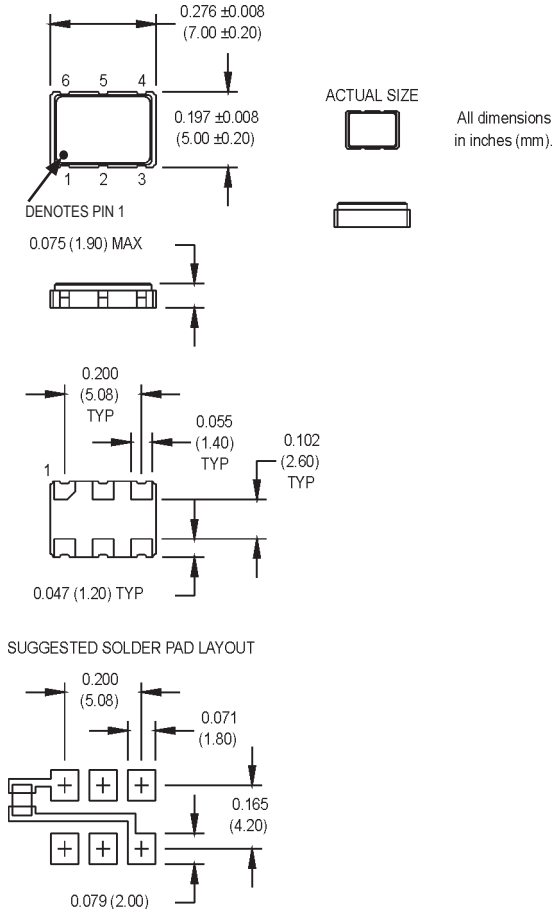


MV3 & MV5 Series

5x7 mm, 3.3 or 5.0 Volt, HCMOS, VCXO



- General purpose VCXO with good performance at an affordable price



Pin Connections

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

Ordering Information	
Product Series	MV3/MV5 1 3 V C N 00.0000 MHz
MV3 = 3.3 Volt	
MV5 = 5.0 Volt	
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	V: Voltage Controlled - no tristate T: Voltage Controlled - tristate
Symmetry/Logic Compatibility	C: 45/55 CMOS G: 40/60 CMOS
Package/Lead Configurations	N: Leadless Ceramic
Frequency (customer specified)	

*Consult Factory for availability
M3006Sxxx & M3008Sxxx - Contact factory for datasheets.

PARAMETER	Symbol	Min.	Typ.	Max	Units	Condition/Notes
Frequency Range	F	1.544		167	MHz	MV3 See Note 4
		1.544		45	MHz	MV5 See Note 4
Operating Temperature	T _A	(See ordering information)				
Storage Temperature	T _S	-45		+95	°C	
Frequency Stability	ΔF/F	(See ordering information)				
Aging						
1 st Year		-3/-5		+3/+5	ppm	< 52 MHz / ≥ 52 MHz
Thereafter (per year)		-1/-2		+1/+2	ppm	< 52 MHz / ≥ 52 MHz
Pullability		±80			ppm	Over control voltage
Control Voltage	V _C	0.3	1.65	3.0	V	MV3
		0.5	2.5	4.5	V	MV5
Linearity				15	%	Positive Monotonic Slope
Modulation Bandwidth	f _m	10			kHz	-3 dB bandwidth
Input Impedance	Z _{in}	50k			Ohms	
Input Voltage	V _{DD}	3.135	3.3	3.465	V	MV3
		4.5	5.0	5.5	V	MV5
Input Current	I _{DD}					
1.544 to 36 MHz				20	mA	MV3
36 to 167 MHz				50	mA	MV3
1.544 to 50 MHz				35	MA	MV5
Output Type						HCMOS
Load				15	pF	See Note 1
Symmetry (Duty Cycle)		(See ordering information)				50% V _{DD} Level
Logic "1" Level	V _{OH}	90			% V _{DD}	HCMOS load
Logic "0" Level	V _{OL}		10		% V _{DD}	HCMOS load
Rise/Fall Time	T _r /T _f					See Note 2
1.544 to 60 MHz				5	ns	MV3
60 to 167 MHz				2	ns	MV3
1.544 to 50 MHz				5	ns	MV5
Tristate Function		Input Logic "1" or floating: output active Input Logic "0": output disables to high-Z				
Start up Time			4		ms	
Phase Jitter	Φ _J					See Note 3
20 - 45 MHz			0.5	1.0	ps RMS	Integrated 12 kHz - 20 MHz
45 - 167 MHz			3.0	5.0	ps RMS	Integrated 12 kHz - 20 MHz
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz
@ 19.44 MHz		-70	-100	-132	-140	-150
						Offset from carrier dBc/Hz
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C				
	Vibration	Per MIL-STD-202, Method 201 & 204				
	Max Soldering Conditions	See solder profile, Figure 1				
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium)				
	Solderability	Per MIL-STD-883, Method 2003				

- HCMOS Load - See load circuit diagram #2.
- Rise/Fall times are measured between 10% V_{DD} and 90% V_{DD} with HCMOS load.
- Contact factory for non-standard jitter requirements.
- Contact factory for frequencies outside of the ranges shown.

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

MtronPTI Lead Free Solder Profile

