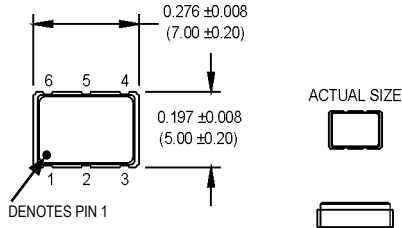


# MV3 & MV5 Series

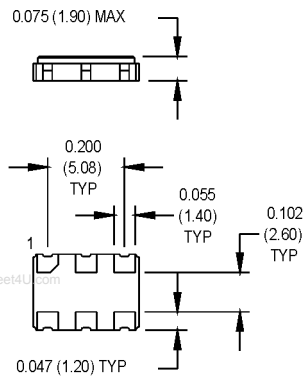
5x7 mm, 3.3 or 5.0 Volt, HCMOS, VCXO



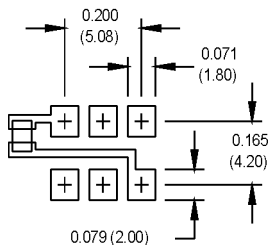
- General purpose VCXO with good performance at an affordable price



All dimensions in inches (mm).



SUGGESTED SOLDER PAD LAYOUT



## 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

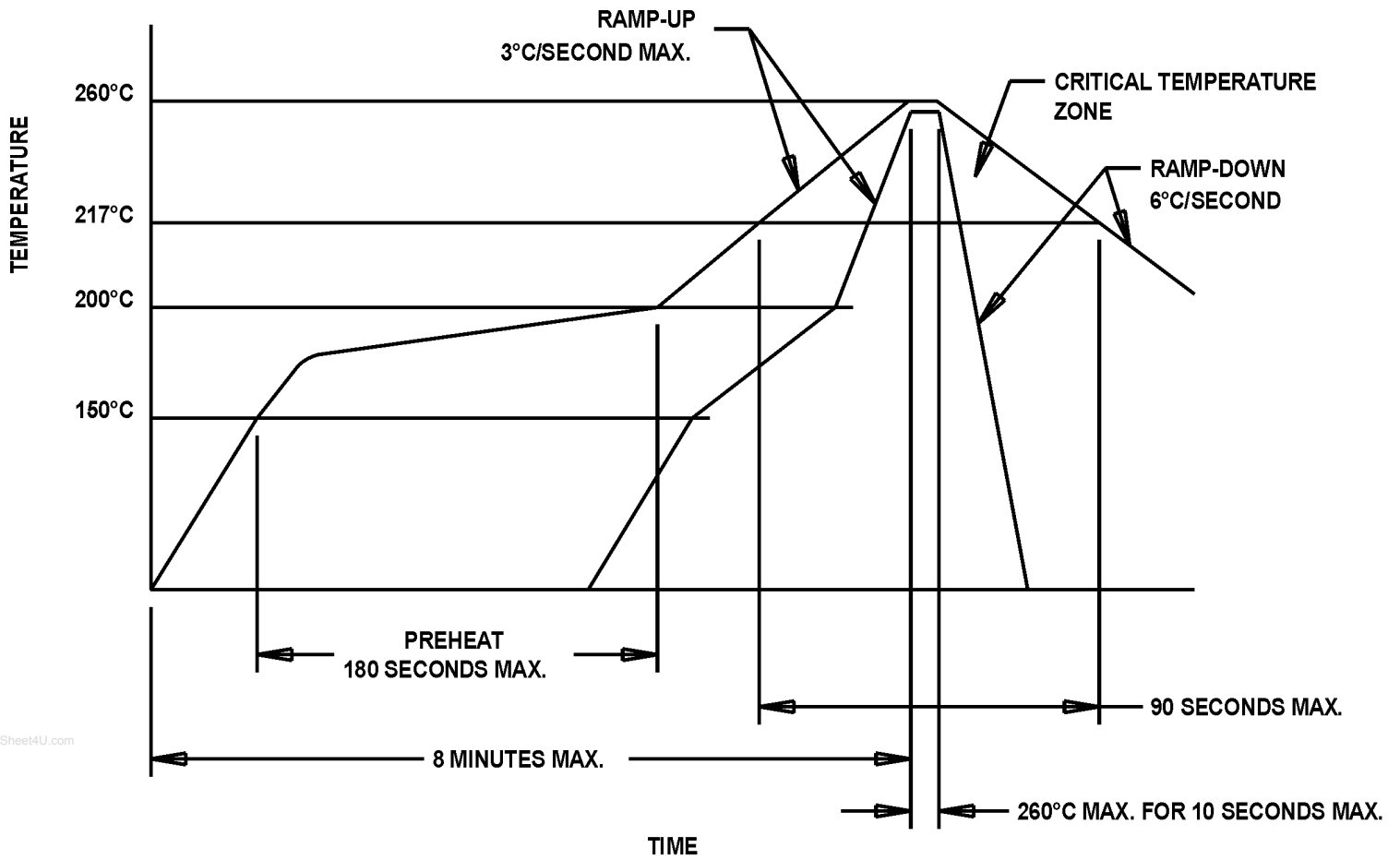
PARAMETER	Symbol	Min.	Typ.	Max	Units	Condition/Notes
Frequency Range	F	1.544		167	MHz	MV3 See Note 4
		1.544		45	MHz	MV5 See Note 4
Operating Temperature	T <sub>A</sub>	(See ordering information)				
Storage Temperature	T <sub>S</sub>	-45		+95	°C	
Frequency Stability	ΔF/F	(See ordering information)				
Aging						
1 <sup>st</sup> 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 <sub>c</sub>	0.3	1.65	3.0	V	MV3
		0.5	2.5	4.5	V	MV5
Linearity				15	%	Positive Monotonic Slope
Modulation Bandwidth	f <sub>m</sub>	10			kHz	-3 dB bandwidth
Input Impedance	Z <sub>in</sub>	50k			Ohms	
Input Voltage	V <sub>dd</sub>	3.135	3.3	3.465	V	MV3
		4.5	5.0	5.5	V	MV5
Input Current	I <sub>dd</sub>					
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 <sub>dd</sub> Level				
Logic "1" Level	V <sub>oh</sub>	90			% V <sub>dd</sub>	HCMOS load
Logic "0" Level	V <sub>ol</sub>			10	% V <sub>dd</sub>	HCMOS load
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>					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 <sub>J</sub>					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)						Offset from carrier
@ 19.44 MHz	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	dBc/Hz
	-70	-100	-132	-140	-150	

1. See load circuit diagram #2.
2. Rise/Fall times are measured between 10% V<sub>dd</sub> and 90% V<sub>dd</sub> with HCMOS load.
3. Contact factory for non-standard jitter requirements.
4. Contact factory for frequencies outside of the ranges shown.

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# MtronPTI Lead Free Solder Profile



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