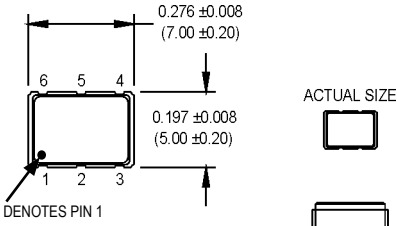


MV3 & MV5 Series

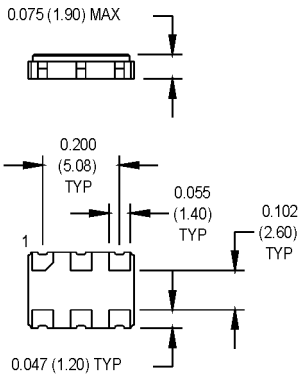
5x7 mm, 3.3 or 5.0 Volt, HCMOS, VCXO



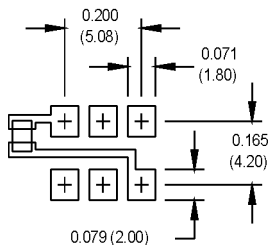
- **General purpose VCXO with good performance at an affordable price**



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		MV3/MV5	1	3	V	C	N	00.0000	MHz
Product Series									
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)									

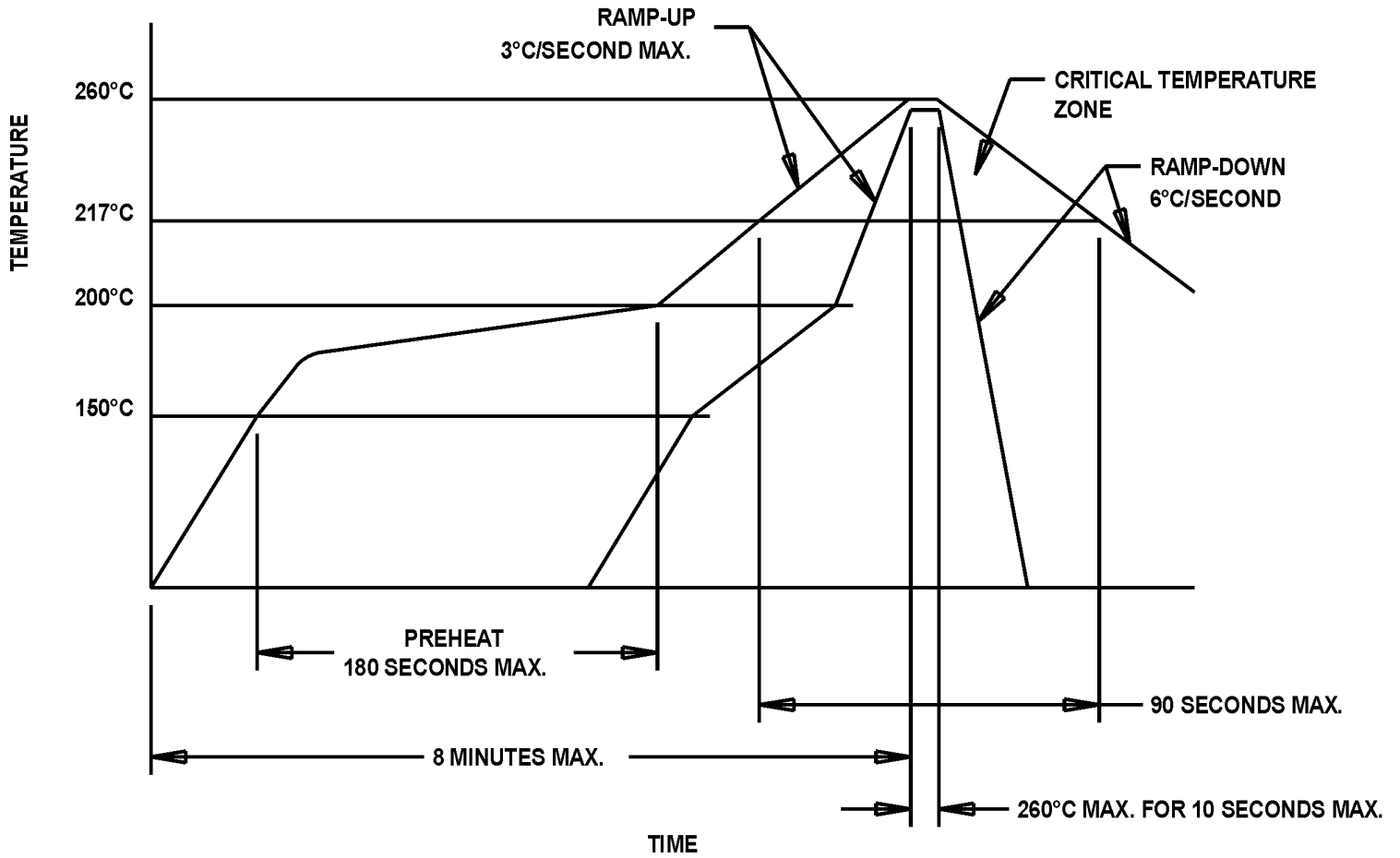
*Consult Factory for availability

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 _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)						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_{dd} and 90% V_{dd} 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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