

# OSCILLATOR SPECIFICATION

**When placing an order for oscillators, please fill in the following form:**

1	Nominal Frequency, MHz		
2	Operating temperature range, °C Frequency stability vs. temperature		
3	Aging after _____ hours of continuous operation: per year, less than, *±10 <sup>-7</sup> per day, less than, *±10 <sup>-9</sup>		
4	Short term stability (Allan deviation) for 1s, less than, *10 <sup>-11</sup>		
5	Output signal (Sin, TTL, HCMOS)	Sin Load _____ Ohm Output voltage _____ mV Harmonic suppression _____ dB	TTL/HCMOS Load _____/_____ Duty cycle
6	Frequency stability vs. load	± _____ from load change _____ %	
7	Voltage supply, V Changes, %	± _____	
8	Frequency stability vs. voltage supply Change, %	± _____	
9	Steady state current consumption, mA Peak current consumption after switch-on (for OCXO), mA	_____ at _____ °C	
10	Warm-up time, min	_____ within _____ *±10 <sup>-7</sup>	
11	Phase noise, dBc/Hz for offset:	1 Hz _____ 10 Hz _____ 100 Hz _____ 1000 Hz _____ 10000 Hz _____	
12	Frequency pulling range: with external potentiometer _____ kOhm with external voltage from _____ V to _____ V		
13	Case dimensions, mm or inches		
14	Storage temperature range, °C		
15	Shock, g		
16	Vibrations,: Frequency range, Hz Acceleration, g		
17	Additional data		

**Approved:**

On behalf of the Customer

Morion, Inc.

# RESONATOR SPECIFICATION

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**When placing an order for resonators, please fill in the following form:**

1	Nominal frequency, MHz	
2	Tolerance	_____ ppm at ____ °C
3	Overtone	
4	Package type and/or dimensions, mm	
5	Frequency stability, ppm In the temperature range	from _____ °C to _____ °C
6	Motional resistance $R_1$ max, Ohm	
7	Static capacitance, pF max	
8	Motional capacitance, fF	
9	Motional inductance, H	
10	Spurious mode, $R_N/R_1$ min in the frequency range	from _____ to _____ kHz
11	Drive level, $\mu$ W	
12	Aging: Per year, ppm	
13	Vibration: Frequency range, Hz, Acceleration, g	_____
14	Shock, g	_____
15	Additional data	

**Approved:**

On behalf of the Customer

Morion, Inc.

# FILTER SPECIFICATION

**When placing an order for filters, please fill in the following form:**

1	Center frequency (fc)		MHz ±	Hz
2	Bandwidth	≥±	kHz at	dB
3	Ripple		dB in the range fc ±	kHz
4	Insertion loss	max	dB	
5	Attenuation	>	dB at fc ±	kHz
		>	dB at fc ±	kHz
6	Shape factor		dB:	dB= 1:
			dB:	dB= 1:
7	Ultimate attenuation	>	dB: from fc ±	Hz to ± kHz
		>	dB: from fc ±	Hz to ± kHz
		>	dB: from fc ±	Hz to ± kHz
8	Spurious response	>	dB: from fc ±	Hz to ± kHz
		>	dB: from fc ±	Hz to ± kHz
9	Group delay distortion		µs in the range fc ±	kHz
10	Termination	input	Ohm ±	% pF ±
		output	Ohm ±	% pF ±
11	Operating temperature range, °C	_____		
12	Storage temperature, °C	_____		
13	Shock, g	_____		
14	Vibration: Frequency Range, Hz Acceleration, g	_____		
15	Case dimensions, mm or inches	_____		
16	Additional data	_____		

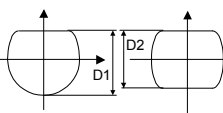
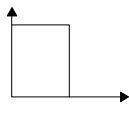
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# QUARTZ BLANKS SPECIFICATION

When placing an order for quartz blanks, please fill in the following form:

Blank type: plano-plano, plano-convex, bi-convex			
Q-value, swept or unswept quartz			
Cut (AT, BT, DT, SC, etc.)			
First rotation angle: nominal and tolerance		_____ XX'      _____ ΔXX'	
		φ                      Δ φ	
Second rotation angle: nominal and tolerance		_____ ZZ'      _____ ΔZZ'	
		Θ                      ΔΘ	
Nominal frequency / Overtone		_____ kHz /	Finish abra- sive, μ
<p style="text-align: center;"><b>Outline (including tolerance)</b></p> <p style="text-align: center;">Diameter,</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>D1, D2 size,</p> <p>Flat along the axis _____</p> </div> </div> <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="margin-left: 10px;"> <p>Sphere radius</p> <p>Length along the axis _____</p> <p>Width along the axis _____</p> <p>Face</p> </div> </div>		+ _____ mm mm - _____ mm	
		+ _____ mm mm - _____ mm	
		± _____ degrees	
		mm ± _____ mm	
		_____ mm ± _____ mm	
		_____ mm ± _____ mm	
		_____ mm ± _____ mm	
Final frequency	Plano-plano, kHz	_____ min    _____ max	
	Lenses, kHz	_____ min    _____ max	
	After etching, kHz	_____ min    _____ max	
Manufacturing features, control features, etc.:			

**Approved:**

On behalf of the Customer

Morion, Inc.