**MINIATURE HIGH FREQUENCY PRECISION LOW PHASE NOISE OCXO MV218**

**Features:**
- **Small package size of 26x26x10.3 mm**
- **Low Phase Noise: floor of ~167 dBc/Hz**
- **Wide temperature range**
- **Very short warm-up time – less than 60 seconds**

**Power Supply**
- 5 V
- 12 V

**ORDERING GUIDE:** MV218–B 300 J–12V–3–100.0 MHz–A10

**Additional notes:**
- For non standard operating temperature ranges please use the following two letters designations (first letter for the lower limit, second letter for the upper limit), °C:

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | T | U | W | X |
| -60 | -55 | -50 | -45 | -40 | -30 | -20 | -10 | 0 | +10 | +30 | +40 | +45 | +50 | +55 | +60 | +65 | +70 | +75 | +80 | +85

**Package type, mm**
- 25.8x25.8x10.3 A10
- 25.8x25.8x12.7 (with SMA-connector) N

**Package drawings:**
- A10: Only for frequency range 48-240 MHz
- N: Only for frequency >240 MHz

**Frequency range:** 48.0-1228.8 MHz
- Standard frequencies: 50.0; 84.0; 98.304; 100.0; 120.0; 122.88; 160.0; 200.0; 400.0; 500.0; 644.0; 700.0; 840.0; 900.0; 1000.0; 1228.8 MHz;

**Availability of certain stability vs. operating temperature range**

<table>
<thead>
<tr>
<th>Temperature range</th>
<th>±5x10^-8</th>
<th>±3x10^-8</th>
<th>±1x10^-7</th>
<th>±5x10^-7</th>
<th>±1x10^-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0…+55°C</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>B</td>
<td>-10…+60°C</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>C</td>
<td>-20…+70°C</td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>NA</td>
</tr>
<tr>
<td>D</td>
<td>-40…+70°C</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>NA</td>
</tr>
<tr>
<td>EX*</td>
<td>-40…+85°C</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>NA</td>
</tr>
</tbody>
</table>

**A – available, NA – not available, C – consult factory**

*for options without frequency multiplication. Upper operating temperature limit for options with frequency multiplication is +70 deg C.*

**For other temperature ranges see designation at the end of Data Sheet.**

**Features:**
- Low Phase Noise: floor of ~167 dBc/Hz
- Wide temperature range
- Very short warm-up time – less than 60 seconds

**Aging**
- L: 1,5x10^-8/year
- K: 1x10^-8/year
- J: 5x10^-7/year
- I: 3x10^-7/year
- H: 2x10^-7/year
- G: 1x10^-7/year

**Phase noise, dBc/Hz (for 100.0 MHz)**

<table>
<thead>
<tr>
<th>Option</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Hz</td>
<td>-85</td>
<td>-85</td>
<td>-90</td>
<td>-90</td>
</tr>
<tr>
<td>100 Hz</td>
<td>-115</td>
<td>-115</td>
<td>-120</td>
<td>-120</td>
</tr>
<tr>
<td>1000 Hz</td>
<td>-140</td>
<td>-140</td>
<td>-145</td>
<td>-145</td>
</tr>
<tr>
<td>10000 Hz</td>
<td>-152</td>
<td>-152</td>
<td>-155</td>
<td>-155</td>
</tr>
</tbody>
</table>

**Frequency stability vs. power supply change**
- ±2x10^-8/year

**Frequency stability vs. load power change**
- ±1x10^-7/year

**Warm up time within accuracy of 5x10^-7 at 25°C**
- <60 sec

**Power supply (Us)**
- 12 V ±10%
- 5 V ±10%

**Steady state current consumption @ 25°C**
- <115 mA
- <250 mA
- <300* mA

**Peak current consumption during warm up @ 25°C**
- <370 mA
- <450* mA
- <800 mA

**Reference voltage output (Uref)**
- +10…11 V
- +4.3…4.6 V

**Output with external control voltage range (Uin)**
- 0…+10 V
- 0…+4.5 V

**Frequency pulling range**
- ±2(5…3)x10^-6

**Output Level**
- >400 mV RMS

**Load**
- 50 Ohm ±10%

**Harmonics**
- <25 dBc

**Sub-harmonics**
- <20° dBc

**Vibrations**
- 10-500 Hz, 5g

**Storage temperature range**
- -55…+70 °C

**For non standard operating temperature ranges please use the following two letters designations (first letter for the lower limit, second letter for the upper limit), °C:**

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | T | U | W | X |
| -60 | -55 | -50 | -45 | -40 | -30 | -20 | -10 | 0 | +10 | +30 | +40 | +45 | +50 | +55 | +60 | +65 | +70 | +75 | +80 | +85

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