## FEATURES:
- Tri state function
- Suitable for high density SMT
- Available tight stability option +/-20ppm
- Seam sealed package assures high reliability performance
- Suitable for RoHS compliant reflow process

## APPLICATIONS:
- CCD clock for VTR camera
- Equipment connected to PC or PC cards
- Thin equipment
- Wireless communication
- PDA, Laptop computer

## STANDARD SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>0.321</td>
<td>-</td>
<td>133.33 MHz</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10</td>
<td>-</td>
<td>+70 °C</td>
<td>°C</td>
<td>See options</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55</td>
<td>-</td>
<td>+125 °C</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Overall Frequency Stability</td>
<td>-100</td>
<td>-</td>
<td>+100 ppm</td>
<td>ppm</td>
<td>See options</td>
</tr>
<tr>
<td>Supply Voltage (Vdd)</td>
<td>2.97</td>
<td>3.3</td>
<td>3.63 V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Current</td>
<td>0.321MHz ~ 29.9MHz</td>
<td>-</td>
<td>8 mA</td>
<td>mAh</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30MHz ~ 79.9MHz</td>
<td>-</td>
<td>20 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80MHz ~ 133.33MHz</td>
<td>-</td>
<td>28 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symmetry (@1/2Vdd)</td>
<td>40</td>
<td>50</td>
<td>60 %</td>
<td>%</td>
<td>See options</td>
</tr>
<tr>
<td>Rise and Fall Time (Tr/Tf)</td>
<td>0.321MHz ~ 29.9MHz</td>
<td>-</td>
<td>5 ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30MHz ~ 79.9MHz</td>
<td>-</td>
<td>5 ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80MHz ~ 133.33MHz</td>
<td>-</td>
<td>3 ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Load</td>
<td>-</td>
<td>-</td>
<td>15 pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Voltage</td>
<td>VOH</td>
<td>0.9*Vdd</td>
<td>-</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VOL</td>
<td>-</td>
<td>0.1*Vdd</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIH</td>
<td>0.7*Vdd</td>
<td>-</td>
<td>V</td>
<td>&quot;1&quot; or Open: Oscillation</td>
</tr>
<tr>
<td></td>
<td>VIL</td>
<td>-</td>
<td>0.3*Vdd</td>
<td>V</td>
<td>&quot;0&quot;: Output disable (HiZ)</td>
</tr>
<tr>
<td>Disable Current</td>
<td>0.321MHz ~ 29.9MHz</td>
<td>-</td>
<td>10 µA</td>
<td>µA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30MHz ~ 79.9MHz</td>
<td>-</td>
<td>3 µA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80MHz ~ 133.33MHz</td>
<td>-</td>
<td>10 µA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start-up Time</td>
<td>-</td>
<td>-</td>
<td>10 ms</td>
<td>ms</td>
<td></td>
</tr>
<tr>
<td>Phase Jitter RMS (12kHz to 20MHz)</td>
<td>-</td>
<td>-</td>
<td>1 ps</td>
<td>ps</td>
<td>Reference only. Please contact Abracon for specific frequencies</td>
</tr>
<tr>
<td>Aging</td>
<td>-5.0</td>
<td>-</td>
<td>+5.0 ppm</td>
<td>ppm</td>
<td>@+25°C First year</td>
</tr>
</tbody>
</table>

## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

- **ASFL1** - [blank] MHz - [blank] - [blank]

### Frequency in MHz
- e.g. 24.576MHz
- 14.31818MHz
- 26.000MHz

### Operating Temp.
- L: 0°C ~ +50°C
- D: -10°C ~ +60°C
- E: -20°C ~ +70°C
- F: -30°C ~ +70°C
- N: -30°C ~ +85°C
- L: -40°C ~ +85°C

### Freq. Stability
- J: ± 20 ppm(*)
- R: ± 25 ppm
- K: ± 30 ppm
- H: ± 35 ppm
- B: ± 40 ppm
- C: ± 50 ppm

(*) Temp option I, D, E and -10°C ~ +70°C only.

### Symmetry
- Blank: Bulk
- T: 1000pcs/reel
- T2: 250pcs/reel

### Packaging
- Blank: 40/60% @1/2Vdd
- S: 45/55% @1/2Vdd

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Revised: 04.13.11

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OUTLINE DRAWING:

**Dimensions: inches (mm)**

- Pin 1: Tri-State
- Pin 2: GND
- Pin 3: Output
- Pin 4: Vdd

Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

TAPE & REEL:
- T= Tape and reel (1,000pcs/reel)
- T2= Tape and reel (250pcs/reel)

REFLOW PROFILE:
- **T °C**
- Pre-Heat
- Reflow
- Cool
- 10s max. 1 time at +260°C±3°C
- 60~120s
- 60~90s
- Temperature (°C)
- Time (seconds)

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