



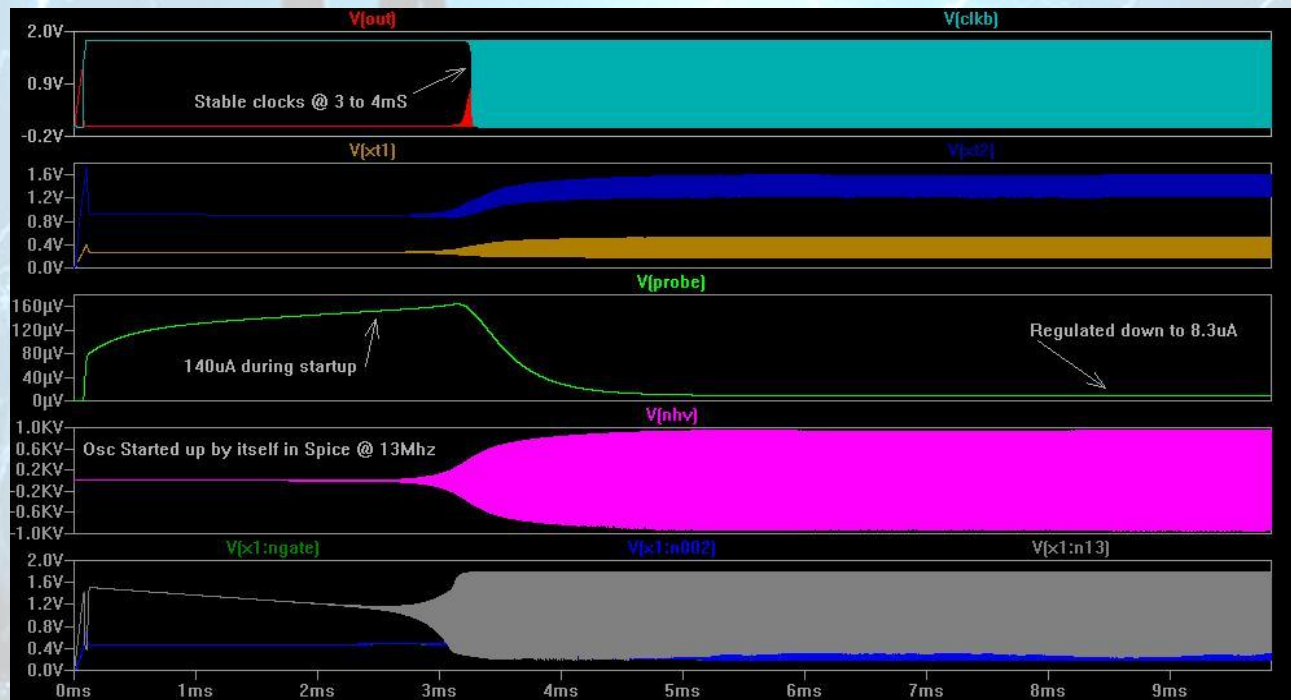
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**CactusIC Low Power High Frequency Quartz Oscillator Specifications**

**Functional Description**

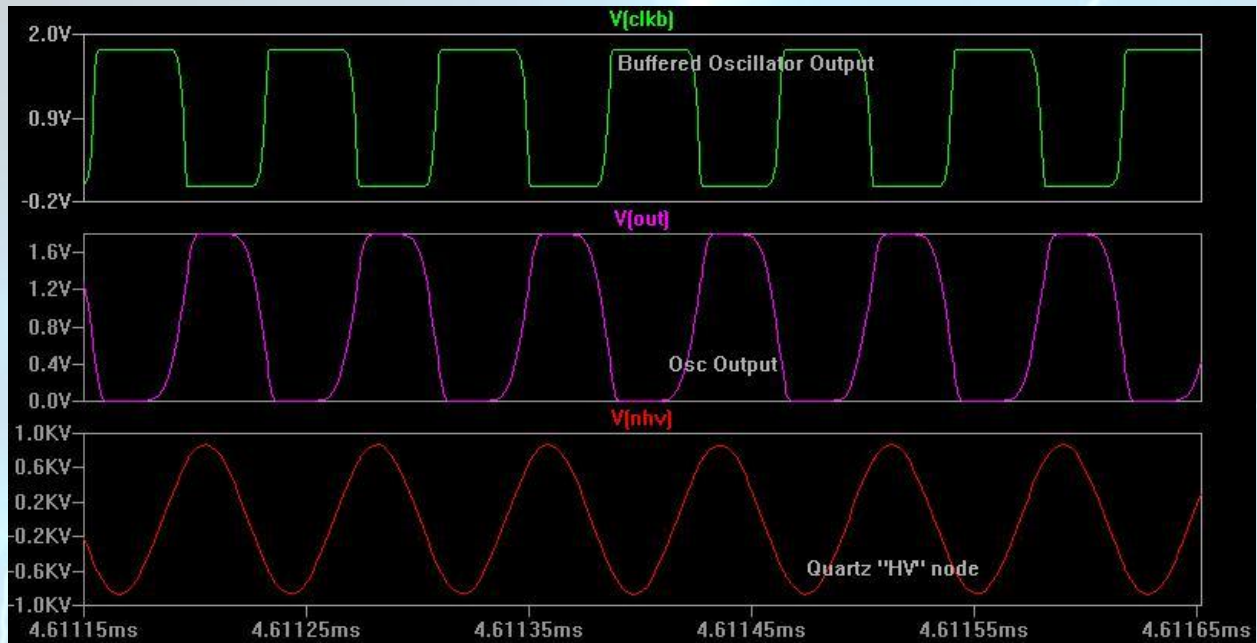
- Low Power High Frequency Band (1Mhz -> 30Mhz) Quartz crystal oscillator
- Typical average supply current much lower than traditional HF crystal oscillator designs
- Oscillator includes built-in output squaring circuit and output buffer for driving digital CMOS gate
- The Quartz LOAD capacitors (typically 20PF each) can be external or internal to the IC
- Available in a range of process choices (90nm, 130nm, 0.18um, etc.)
- Oscillator is self biased and requires no external feedback resistor required
- Amplifies and passes through square wave signal driven at XT1 for e-test or bypass
- Built in Proactive Start Up Circuit ensures reliable starting

**Operating Conditions**

Symbol	Parameter	Min	Typ	Max	Unit
V <sub>DDA</sub>	Positive Supply Voltage	1.5	1.8	2.5	V
V <sub>SSA</sub>	Negative Supply Voltage		0.0		V
T <sub>j</sub>	Junction Temperature	-40	27	125	°C



Oscillator Start-up Waveform Fosc=13Mhz, Q=73,000, TT Corner, 1.8Vdc



Steady State Oscillator Waveforms (Zoomed )