

FEATURES

- **OC51 9.7 x 7.5 x 4.1mm Miniaturized SMD 4 pad package**
- **+3.3V and 5.0V Supply voltage options**
- **Voltage Control as standard**
- **IT cut crystal**
- **Best Stability $\pm 20\text{ppb}$**
- **ITAR Free**


GENERAL SPECIFICATIONS

Supply Voltage		+3.3V	+5.0V
Supply Voltage Range:		+3.3V $\pm 5\%$	+5.0V $\pm 5\%$
Frequency Range:		10.0MHz - 40.0MHz	10.0MHz - 40.0MHz
Output Logic High (VOH)		+2.4V (min.)	+4.5V (min.)
Output Logic Low (VOL)		+0.4V (max.)	+0.4V (max.)
Duty Cycle		50% $\pm 5\%$	50% $\pm 5\%$
Load		15pF	15pF
Power Dissipation/Current at Turn-on (@ 25°C)		0.4W/350mA (max.)	0.4W/350mA (max.)
Initial Calibration Tolerance		$\pm 500\text{ppb}$ (max.) Vcon=+1.65V	$\pm 500\text{ppb}$ (max.) Vcon=+2.5V
Type of Crystal		Quartz IT Cut	
Frequency Stability:	vs Temperature (refer to +25°C)	$\pm 10\text{ppb}$ (max.) over -30°C to +70°C	
		$\pm 20\text{ppb}$ (max.) over -40°C to +85°C	
	vs Voltage Change	$\pm 10\text{ppb}$ (max.) For a $\pm 5\%$ input voltage change	
	vs Warm-up Time (+25°C)	5 min max. Within $\pm 0.1\text{ppm}$ of reference frequency	
	vs Ageing	$\pm 3.0\text{ppb}$ (max.) after 30 days; $\pm 600\text{ppb}$ (max.) first year $\pm 3\text{ppm}$ (max.) over 10 years	
	vs Reflow	$\pm 1.0\text{ppm}$ (max.) 1 reflow measured 24hrs afterwards	
Voltage Control:	Freq. Deviation Range	$> \pm 5\text{ppm}$ Reference to F0 at +25°C and over operating temp range	
	Control Voltage Range	+1.65V, $\pm 1.65\text{V}$	
	Transfer Function	Positive: Increasing control voltage increases output frequency	
	Input Impedance	100K Ω (min.)	
	EFC Linearity	$\pm 10\%$ (max)	
Rise and Fall Time		7nS (max.) 20% -80% of waveform	

Phase Noise

Phase Noise Offset [20.0MHz typical]	10Hz	100Hz	1kHz	10kHz
	-98dBc	-126dBc	-145dBc	-152dBc

(Refer To Phase Noise Graph - Page 2)

