

5 x 3.2mm SMD High Precision Oscillator

1.0MHz to 56.0MHz

FEATURES

- High frequency stability 5 x 3.2mm SMD oscillator
- Femto second integrated phase jitter (300 fs typical)
- Superior phase noise -145dBc/Hz at 100kHz offset
- Frequency Range 1.0MHz to 56MHz
- Supply voltage 1.8V, 2.5V or 3.3Volts



DESCRIPTION

HR53 oscillators are high performance SMD clock oscillators with tight temperature stability. The part exhibits superior phase noise performance, -145dBc/Hz at 10kHz and -150dBc/Hz at 100kHz offset. Integrated phase jitter is 300fs typical, 12kHz to 20MHz.

SPECIFICATION

Frequency Range:	1.0MHz to 56.0MHz
Frequency Stability	
Commercial:	from ± 7 ppm over -10° to $+70^{\circ}\text{C}$
Industrial:	from ± 15 ppm over -40° to $+85^{\circ}\text{C}$
Output Voltage HIGH '1':	Vdd-0.4 min.
Output Voltage LOW '0':	0.1V typical. 0.4V maximum
Output Logic:	LVC MOS
Current Consumption:	Supply voltage dependent, see table
Load:	15pF
Rise/Fall Time:	2ns typical (10% to 90%Vdd)
Start-up Time:	0.6ms typical, 1.0ms maximum
Symmetry:	50% \pm 5% measured at Vdd/2
Tristate Function:	Implemented as standard
Phase Jitter:	300 fs typical, 12kHz to 20MHz
Phase Noise:	See table
Storage Temperature:	-55° to $+150^{\circ}\text{C}$
Ageing:	± 2 ppm/year max. for first year

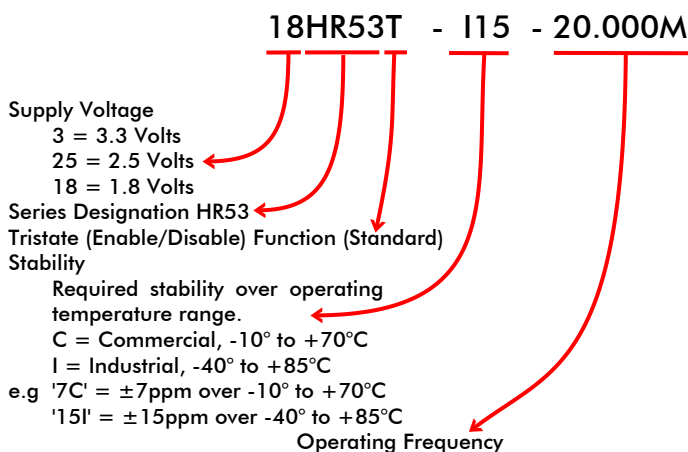
Current Consumption	Supply Voltage ($\pm 10\%$)		
	+1.8V	+2.5V	+3.3V
Supply 1.0~19.99MHz	1.5mA	2.5mA	4.0mA
Current 20.0~39.99MHz	3.0mA	3.5mA	5.0mA
Typical 40.0~52.0MHz	4.5mA	5.0mA	7.0mA

SSB PHASE NOISE

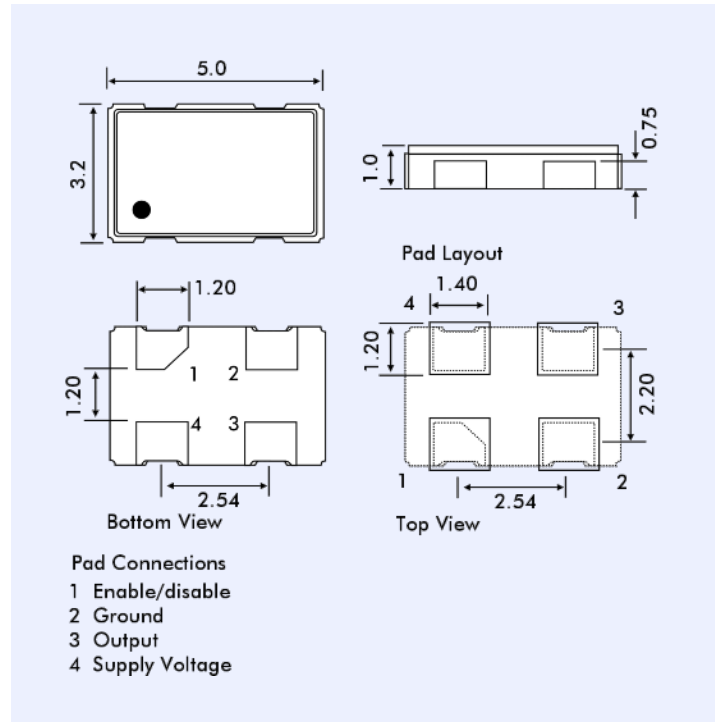
Offset dBc/Hz	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz
	-65	-100	-130	-148	-152	-152	-155

PART NUMBERING

Example: 18HR53T-I15-20.000M



OUTLINE & DIMENSIONS



SOLDER TEMPERATURE PROFILE

