

## 3.2 x 2.5mm 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

HR32 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 $\pm 7$ ppm over $-10^{\circ}$ to $+70^{\circ}\text{C}$
Industrial:	from $\pm 15$ ppm over $-40^{\circ}$ 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:	$-55^{\circ}$ to $+150^{\circ}\text{C}$
Ageing:	$\pm 2$ ppm/year max. for first year

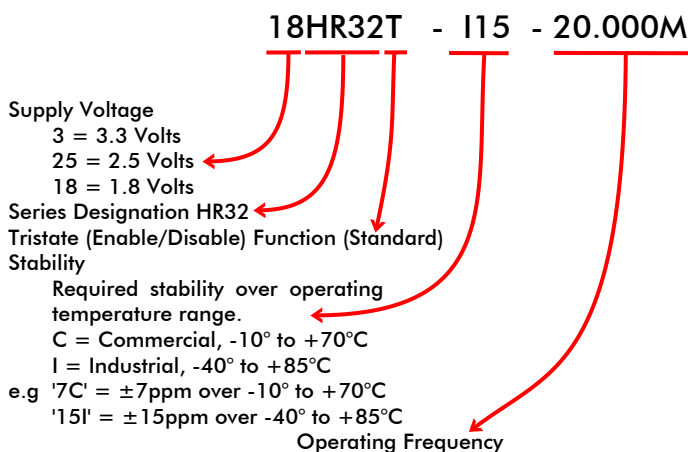
Current Consumption	Supply Voltage ( $\pm 10\%$ )		
	+1.8V	+2.5V	+3.3V
<b>Supply</b> 1.0~19.99MHz	1.5mA	2.5mA	4.0mA
<b>Current</b> 20.0~39.99MHz	3.0mA	3.5mA	5.0mA
<b>Typical</b> 40.0~52.0MHz	4.5mA	5.0mA	7.0mA

### SSB PHASE NOISE

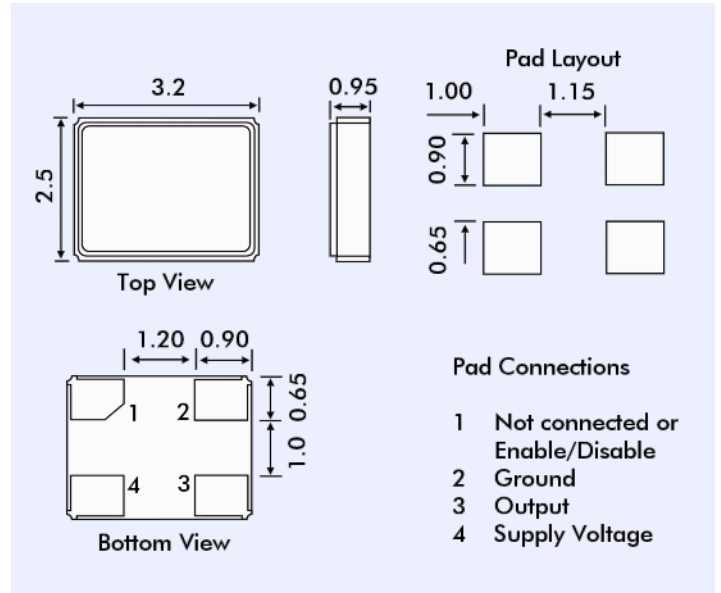
Offset dBc/Hz	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz
	-65	-100	-130	-148	-152	-152	-155

### PART NUMBERING

Example: 18HR32T-I15-20.000M



### OUTLINE & DIMENSIONS



### SOLDER TEMPERATURE PROFILE

