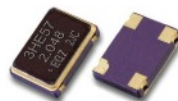


5 x 3.2mm SMD Tight Tolerance Oscillator 20.0MHz to 60.0MHz

FEATURES

- $\pm 1\text{ppm}$ tolerance, $\pm 5\text{ppm}$ over -10° to $+70^\circ\text{C}$
- A clock oscillator with close to TCXO performance
- Femto second phase jitter and -154dBc/Hz at 100kHz offset
- An economic solution for tight tolerance and stability clocks



DESCRIPTION

XOE53 oscillators are high performance SMD clock oscillators with tight temperature stability. Frequency tolerance is $\pm 1\text{ppm}$ at 25°C with stability of $\pm 5\text{ppm}$ over -10° to $+70^\circ\text{C}$. XOE53 oscillators exhibit superior phase noise performance: -154dBc/Hz at 100kHz . Integrated phase jitter is 300fs typical, 12kHz to 20MHz .

SPECIFICATION

Frequency Range:	20.0MHz to 60.0MHz
Output Logic:	LVC MOS
Frequency Tolerance:	$\pm 1\text{ppm}$ maximum at 25°C
Frequency Stability:	$\pm 5\text{ppm}$ over -20° to $+70^\circ\text{C}$ (see part number information)
Output Voltage HIGH '1':	$V_{\text{dd}} * 0.9$ minimum
Output Voltage LOW '0':	$V_{\text{dd}} * 0.1$ maximum
Load:	15pF
Current Consumption:	Supply voltage dependent, see table
Rise/FallTime	
$V_{\text{dd}} 1.8\text{V}$ or 2.5V :	6ns maximum (10% to 90% V_{dd})
$V_{\text{dd}} 3.3\text{V}$:	4ns maximum (10% to 90% V_{dd})
Start-up Time:	0.6ms typical, 1.0ms maximum
Symmetry:	$50\% \pm 5\%$ measured at $V_{\text{dd}}/2$
Tristate Function (Pad 1):	Implemented as standard
Phase Jitter (rms):	300fs typical, 12kHz to 20MHz
Phase Noise:	See table
Storage Temperature:	-55° to $+150^\circ\text{C}$
Ageing:	$\pm 2\text{ppm/year}$ max. for first year

CURRENT CONSUMPTION

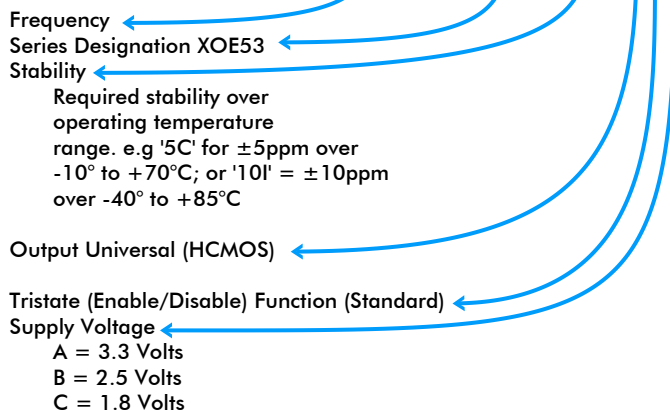
Frequency	Supply Voltage ($\pm 10\%$)		
	+1.8V	+2.5V	+3.3V
20.0~39.99MHz	3.0mA	3.5mA	4.0mA
40.0~5.0MHz	4.5mA	5.0mA	7.0mA

SSB PHASE NOISE

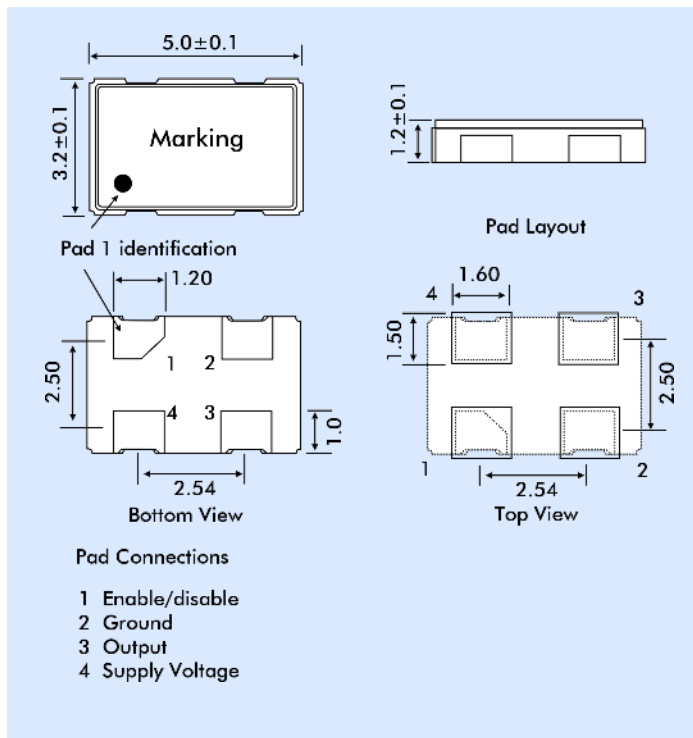
Offset	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz
dBc/Hz	-70	-101	-128	-148	-154	-156	-160

PART NUMBERING

Example: **32.000MHz XOE53-5C-UTC**



OUTLINE & DIMENSIONS



SOLDER TEMPERATURE PROFILE

