EURO QUARTZ

XOY53 Series Automotive Oscillators

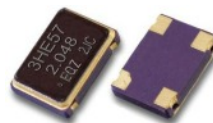## 5.0 x 3.2mm, Wide Temp Automotive

1.25MHz to 50.0MHz

FEATURES

- Femto second integrated phase jitter 150fs typical (12kHz to 20MHz)
- Superior phase noise performance: -155dBc/Hz at 10kHz and -160dBc at 100kHz offset
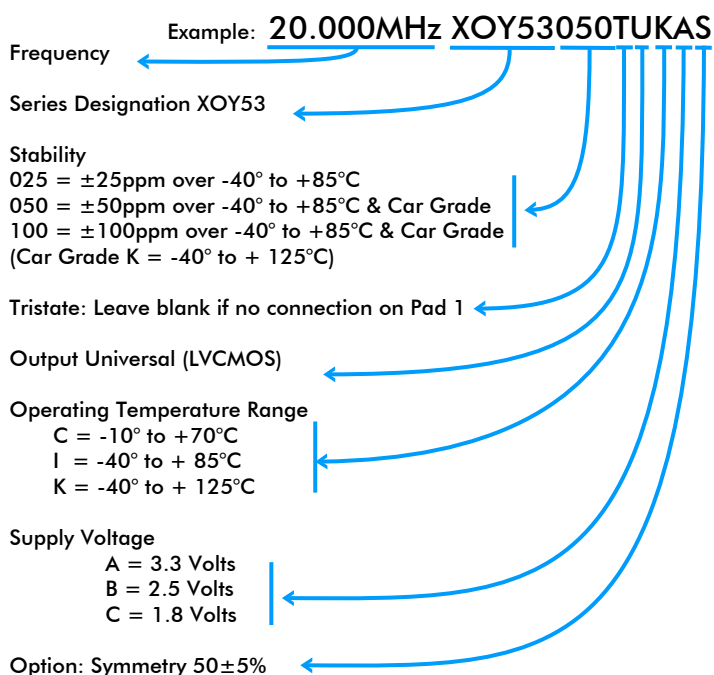- Wide operating temperature available to -40° to +125°C
- Automotive grade

SPECIFICATION

Model Number		XOY Series		
Frequency Range		1.250MHz to 50.000MHz		
Output Logic		LVCMOS		
Supply Voltage V$_{DD}$		1.8 V$_{DD}$ ±10%	+2.5 V$_{DD}$ ±10%	+3.3 V$_{DD}$ ±10%
Logic High "1" (90% of V$_{DD}$ minimum)		1.62V	2.25V	2.97V
Logic Low "0" (10% of V$_{DD}$ maximum)		0.18V	0.25V	0.33V
Current Consumption	1.25~19.99MHz	2.0mA (max)	3.0mA (max)	4.0mA (max)
	20~50.00MHz	4.0mA (max)	5.0mA (max)	6.0mA (max)
Rise Time (Tr) / Fall Time (Tf)		10ns (max) measured 10% ~ 90% waveform		
Load		15pF		
Start-up Time		5ms (max)		
Duty Cycle		Standard: 50%±10% ; Option 50% ±5% (Add "S" after the part number for this option)		
Tristate Function		Tristate function on Pad 1 is standard for XOY series oscillators 70% of VDD(min) Enable Output 30% of VDD(max) Disable Output		
Phase Jitter (RMS) [26MHz, 3.3V]		150 fs typical (12kHz to 20MHz integrated)		

SSB Phase Noise [25MHz, 3.3V]	Offset	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	5MHz
	dBc/Hz (typical)	-94	-127	-142	-156	-161	-163	-163
Storage Temperature	-65° to +150°C							
Ageing at 25°C	±2ppm maximum for first year							
Solder Profile	260°C max.							

ORDERING/PART NUMBER GENERATION

Example: **20.000MHz XOY53050TUKAS**

Frequency

Series Designation XOY53

Stability
025 = ±25ppm over -40° to +85°C
050 = ±50ppm over -40° to +85°C & Car Grade
100 = ±100ppm over -40° to +85°C & Car Grade
(Car Grade K = -40° to + 125°C)

Tristate: Leave blank if no connection on Pad 1

Output Universal (LVCMOS)

Operating Temperature Range
C = -10° to +70°C
I = -40° to + 85°C
K = -40° to + 125°C

Supply Voltage
A = 3.3 Volts
B = 2.5 Volts
C = 1.8 Volts

Option: Symmetry 50±5%

OUTLINE & DIMENSIONS

Pad Connections
1 Enable/disable
2 Ground
3 Output
4 Supply Voltage

Issue 5