

## EQAX-10S

### TCXO with STRATUM III stability Incl. Holdover

#### DESCRIPTION

The Euroquartz EQAX-10S TCXO conforms to IEC60679-1, Stratum III, providing a low-noise, stable and reliable source of clock signals with electronic frequency control.

#### FEATURES

- Compact, SMD package
- Frequency range from 10MHz to 30MHz
- Operating temperature range, 0° to +70°C
- Operable temperature -30° to +75°C
- Supply Voltage 3.3 Volts
- Electronic Frequency Range ±5ppm

#### SPECIFICATION

Frequency Range:	10.0MHz to 30.0MHz
Standard Frequencies:	12.800MHz, 19.440MHz
<b>Frequency Stability</b>	
Initial Tolerance:	±1.0ppm @+25°C
Vs. Temperature:	±0.28ppm 0° ~ +50°C
Vs. Supply Voltage Var:	±0.1ppm
Vs. Load Change:	±0.1ppm
Long Term Ageing (1st Year):	±1ppm (@40°C)
Long Term Stab. (15 Years):	±4.6ppm

<b>Frequency Adjustment Range</b>	
Electronic Frequency Control:	±5ppm
EFC Voltage Vc:	0.30V to 3.0 Volts
EFC Slope (Df/DVc):	Positive
EFC Input Impedance:	10kΩ

<b>RF Output</b>	
Signal Waveform:	HCMOS
Load:	15pF
Rise/Fall Time:	10ns maximum
Symmetry (Duty Cycle):	60%/40%
Start-up Time:	4ms
<b>Phase Noise (16.384MHz)</b>	
	-95dBc @10Hz offset
	-125dBc @ 100Hz offset
	-140dBc @ 1kHz offset
	-145dBc @ 10kHz offset

<b>Supply Voltage</b>	
Minimum:	+3.13 Volts
Typical:	+3.30 Volts
Maximum:	+3.47 Volts

Current Consumption:	15mA maximum (Steady state)
Operable Temperature Range:	-20° ~ +75°C
Storage Temperature Range:	-40° ~ +85°C

<b>Enclosure:</b>	
Weight:	3gm
Packing Type:	Tape & Reel (IEC 60286-3)

ESD Sensitivity:	1500V minimum (IEC6100-4-2)
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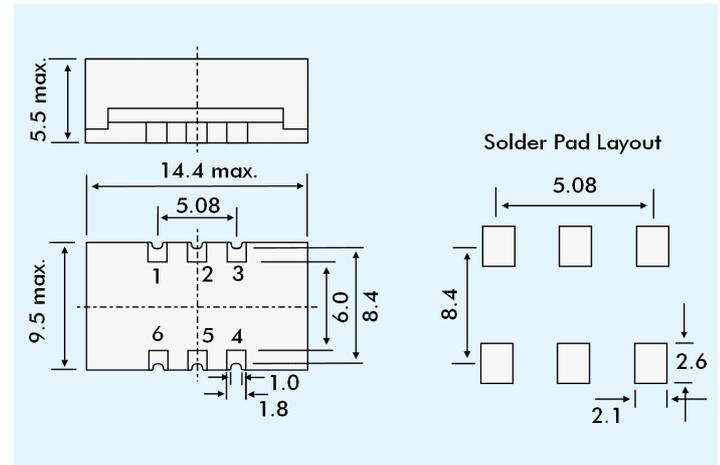
#### ORDERING CODE

To order, specify as follows:

#### FREQUENCY - MODEL

EXAMPLE: **12.800MHz EQAX-10S**

#### OUTLINES AND DIMENSIONS



#### PAD CONNECTIONS

Pad No.	Symbol	Function
1	VC	Control Voltage
2	NC	Not Connected
3	GND	Ground
4	RF OUT	RF Output
5	NC	Not Connected
6	Vs	Supply Voltage

#### ENVIRONMENTAL

Test	IEC 60068 Part . .	IEC 61178-1 Clause . .	Test Conditions
Visual inspection, Dimensions		4.5 4.6	Enclosure styles as in IEC 60122-3, if applic.
Sealing tests	2-17	4.8.2	Gross Leak: Test Qc Fine Leak: Test Qk
Solderability, Resistance to soldering heat	2-20	4.8.3	Test Ta (235±5°C), method 1 Test Tb, method 1A, 5s
Shock	2-27	4.8.8	Test Ea, 3x per axis 100g, 6ms 1/2sine
Bump	2-29	4.8.6	Test Eb, 4000 bumps/axis, 40g, 6ms
Free fall	2-32	4.8.9	Test Ed, procedure 1, 2 drops from 1m ht.
Vibration, Sinsoidal	2-6	4.8.7	Test Fc, 30 min/axis, 10Hz-55Hz, 0.75mm; 55Hz -2kHz, 10g
Rapid change of Temperature	2-14	4.8.5	Test Na, 10 cycles at extremes of operating temperature range.
Dry heat	2-2	4.8.11	Test Ba, 16 h at upper temperature.
Damp heat, cyclic	2-30	4.8.12	Test Db variant 1 severity b, 55°C/95%rh
Cold	2-1	4.8.13	Test Aa, 2h at lower temperature indicated by climatic category.
Climatic sequence	1-7	4.8.14	Sequence of 4.8.11, 4.8.12 and 4.8.13
Damp heat, steady state	2-3	4.8.15	Test Ca, 56 days
Endurance tests, - ageing		4.9.1	30 days @ 85°C
- extended ageing		4.9.2	1kh, 2kh, 8kh, @85°C