Rev C.

SMT STRATUM 3 DIGITAL TCXO 230 SERIES

- **FEATURES:**
  - **Fully meeting free run frequency accuracy and 24 hours maximum frequency drift requirements for STRATUM 3 according to Telecordia GR-1244-CORE (Issue 2)***
  - **Very low power consumption suitable for portable and/or battery operated equipment**

- **ELECTRICAL SPECIFICATION****

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Supply voltage, nom.	Vs	Vs±5%	3.0 5.0	V
Supply current, max.	Is	Vs, nom. / Ta=25°C	2.0 to 5.0	mA
Frequency, nom.	fo	-	10.000 to 40.000	MHz
Overall frequency stability over 10 years of operation including Initial Frequency Calibration	Δfc/fo	Ta=-40°C to + 85°C	±4.6	ppm
Frequency drift during 24 hours of continuous operation, max (See note 1)	Δfc/fo	Ta=-40°C to + 85°C or Ta 0°C to + 70°C	±0.37	ppm
Temperature Stability (See note 2)		Ta=-40°C to + 85°C or Ta=0°C to + 70°C	±0.30 ±0.28	ppm ppm
Control voltage range	Vc	-	+0.25…+2.25	V
Frequency Adjustment Range	Δf/fo (Vc)	Vc= 0.25V Vc= Vs-0.25V	-5 …-10 +5 …+10	PPM PPM
Voltage control (pin 1) input impedance, min.	Z_{in}	-	100	kΩ
Jitter (peak to peak), max (Fnom = 20 MHz)	J(f)	Offset Δf = 12kHz to 20MHz	10	ps
Phase noise SSB @ freq.offset, max (Fnom = 20 MHz)	£ (Δf)	Δf=10Hz Δf=100Hz Δf=1kHz Δf ≥ 10kHz	-80 -110 -130 -145	dBc/Hz dBc/Hz dBc/Hz dBc/Hz
HCMOS output levels Clipped Sine	VOH/VOL Vout	Load = 15pF Load=10 kΩ||20pF	0.9Vcc / 0.1Vcc 0.7	V Vp-p

- **ENVIRONMENTAL SPECIFICATION**

Storage temperature range	-	-45°C….+85°C	
Vibration	-	IEC 68-2-6, test Fc: 10..500 Hz, 10g, 2 h, 3 directions	All parameters within initial limits
Mechanical shocks	-	IEC 68-2-27, test Ea: 100g, ½ sine, 3 bumps, 6 directions	All parameters within initial limits

Notes:

1. The 24 hours drift can be measured any time after minimum 1 hour from initial turn on. Please contact factory for details.
2. The Temperature Stability is calculated with regard to frequency reading at 25°C±1°C.

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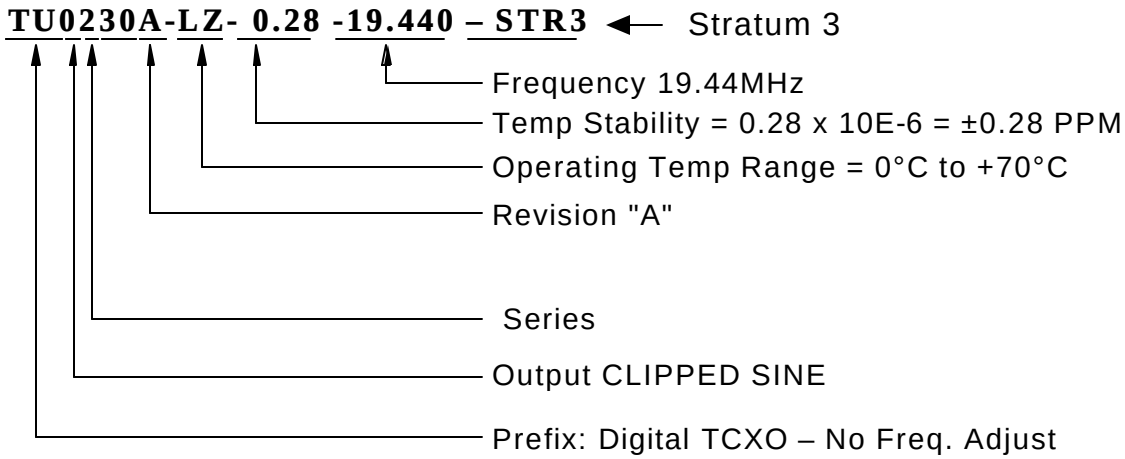
** This specification is typical. Other frequencies, output types and custom parameters are available. Please, contact factory for details.

- **NOT FOR REFLOW PROCESS**

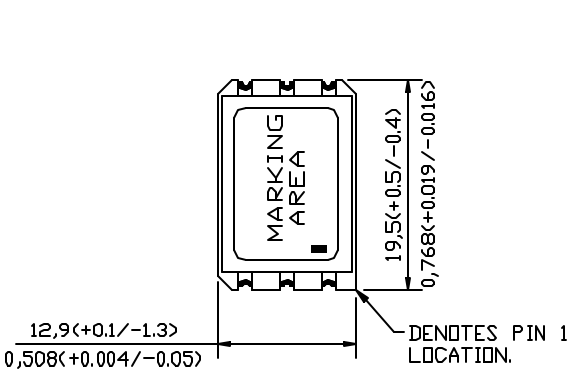
▪ HOW TO ORDER (PART NUMBER)

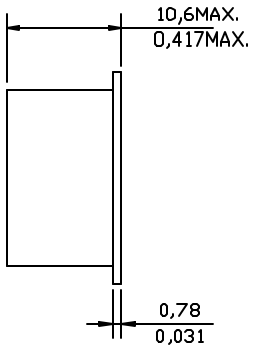
Prefix	Output Type	Series	Revision	Temperature Range	Stability	Frequency
TU; No Freq. Adjust option TY; With Freq Adjust	0: CLIPPED SINE 2:HCMOS 4:LVCMOS	45:230	A	First letter Lowest Temperature, Second letter Highest Temperature: LZ: +0°C to +70°C D3: -40°C to +85°C	Value x 10E-6 Example 0.28= 0.28PPM 0.5= 0.5PPM	In MHZ

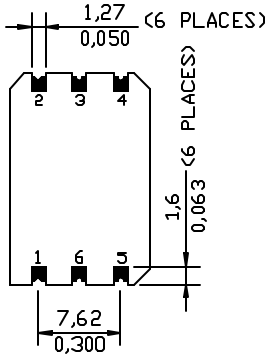
Example:



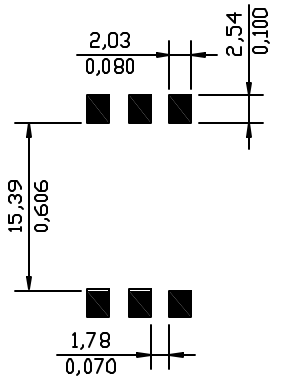
■ **MECHANICAL SPECIFICATION**







FOOTPRINT



OUTLINE TOLERANCE ±0.4mm / ±0.015"

PIN	FUNCTIONS
1	NO CONNECT/ VOLTAGE CONTROL
2	CASE/GROUND
3	INT. CONNECTED*
4	RF OUTPUT
5	SUPPLY VOLTAGE
6	INT. CONNECTED*

*Pins 3 and 6 used for programming. It is recommended to leave them floated, but soldered to board for additional mechanical strength.