

DIP 14 STRATUM 3 DIGITAL (VC) TCXO, TU045A AND TY045A SERIES

■ FEATURES:

- Fully meeting free run frequency accuracy and 24 hours maximum frequency drift requirements for STRATUM 3 according to Telecordia GR-1244-CORE*
- 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%	3.3 5.0	V
HCMOS / LVCMOS Supply current, max. CLIPPED SINWAVE	Is	Vs, nom. / Ta=25°C	12.0 to 20.0 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	$\Delta f/f_0$	Ta=-40°C to + 85°C or Ta= 0°C to + 70°C	±4.6	ppm
Frequency drift during 24 hours of continuous operation, max (See note 1)	$\Delta f/f_0$	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
Elect. Frequency Adjustment Range (see note 3)	$\Delta f/f_0$ (Vc)	Vc= 0.25V Vc= 2.25V	-5 ... -10 +5 ... +10	PPM
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)	\mathcal{E} (Δf)	$\Delta f=10\text{Hz}$ $\Delta f=100\text{Hz}$ $\Delta f=1\text{kHz}$ $\Delta f \geq 10\text{kHz}$	-80 -110 -130 -145	dBc/Hz dBc/Hz dBc/Hz dBc/Hz
HCMOS output levels Clipped Sine	VOH/VOL Vout	Load = 15pF Load=10 k Ω 20pF	0.9Vcc / 0.1Vcc 0.7	V Vp-p
Duty Cycle (HCMOS output)		Load = 15pF	45 to 55	%
Raise/Fall time, max (HCMOS output)	Tr/Tf	Load = 15pF	4	ns

■ 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.
3. TY045A series only.

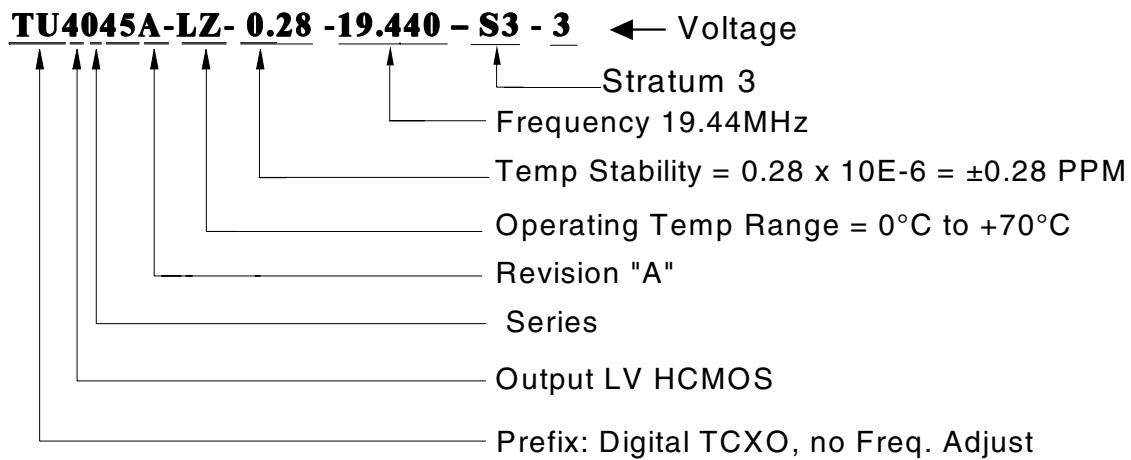
* Telecordia is a trademark of Telecordia Technologies

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

HOW TO ORDER (PART NUMBER)

Prefix	Output Type	Series	Revision	Temperature Range	Stability	Frequency	Stratum3	Voltage
TU: No Freq. Adjust option TY: With Freq. Adjust	0: CLIPPED SINE 2:HCMOS 4:LVC MOS	045	A	LZ: 0°C to +70°C D3: -40°C to +85°C	0.28= 0.28PPM 0.3= 0.3PPM	In MHZ	S3	3: 3.3V 5: 5.0V

Example:



MECHANICAL SPECIFICATION

