

## Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 TEL: 281-870-8822EMAIL:Sales@DynamicEngineers.com TCXO2012S-UHS-xx.xxxMHz-A-B-C-D Ultra-stable TCXO with OCXO type stability

#### **Features and Benefits**

Ultra High Precision; ±100ppb for -40°C to +105°C ±50ppb for -40°C to +85°C 14 pin DIP package footprint Sealed Crystal Package; Sealed Oscillator Package

### **Typical Applications**

Small Cell Base Stations High Performance Mobile Radio Manpack SATCOM clock reference

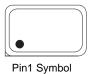
### **Mechanical Drawing & Pin Connections**

#### Drawing No:MD170003-1

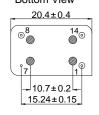
 $7.62 \pm 0.15$ 

12.8±0.4

Top View







Pin#	Function
1	VCON
7	GND
8	Output
14	VDD

Side View

7.8 MAX

6.4 ±0.5

Unit: mm 1mm=0.0394inch

0.45

0.8



# Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 TEL: 281-870-8822EMAIL:Sales@DynamicEngineers.com

### **Specifications**

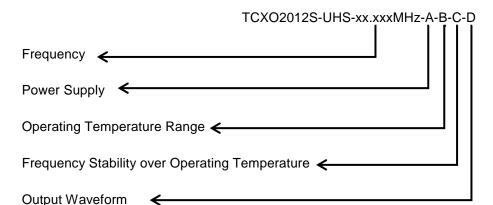
Oscillator		5.0V		3.3V		Unit	Note
Specification	Condition	Min.	Max.	Min.	Max.		
Frequency Range		10.00	40.00	10.00	40.00	MHz	
Standard Frequency		10.00, 12.80, 19.2, 19.44, 20.00, 26.00				MHZ	
RF Output							
Output Wave Form	Clipped Sine Wave	0.8	-	0.8	-	Vp-p	
Output Level							
Output High (Logic "1")	CMOS	3.50	-	2.31	-	V	
Output Low (Logic "0")	emee	-	1.50	-	0.99	V	
Duty		45	55	45	55	%	
Start Time		-	2	-	2	mSec	
Transition Time:	Measured between 10%						
Rise / Fall Time	and 90% or VDD, with	6			nSec		
	an output load of 15pF						
Power Supply							
Supply Voltage Variation	V <sub>DD</sub> ±5%	4.750	5.250	3.135	3.465	V	
Supply Current		-	15	-	10	mA	
Control Voltage	1				1		1
Pulling Range		±5.0	-	±5.0	-	ppm	
Frequency Stability	1				1		
Frequency Tolerance	Frequency @ +25°C						1 hour
		-	±2.0	-	±2.0	ppm	after
	1000 10 00500		50		50		reflow
Over Temperature	-40°C to +85°C	-	±50	-	±50	ppb	
	-20°C to +70°C	-	±30	-	±30		
Supply Voltage Change	±5% change	-	±0.02	-	±0.02	ppm	
Aging (@ 1 <sup>st</sup> year)		-	±1.0	-	±1.0	ppm/	
Phase Noise						year	l
T hase Noise	100 Hz offset	-123					
Phase noise @ 10MHz	1 kHz offset	-123 -143			dBcHz		
	10 kHz offset	-143 -150				UDUNZ	
Environmental Conditions			-130	,			
Parameter		Referenc	e Std				
Operating temperature range	-40°C to +85°C or -40°C to +105°C						
Storage temperature range	-55°C to +125°C						



## Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 TEL: 281-870-8822EMAIL:Sales@DynamicEngineers.com

## **Ordering Options**



**Options Codes** Description Options Frequency up to 3 decimals Standard Frequencies XX.XXX 10.000MHz, 12.800MHz, 19.200MHz, 19.440MHz, 20.000MHz, 26.000MHz 1 = +5V А Power Supply 2 = +3.3V $1 = -40^{\circ}C \text{ to } +105^{\circ}C$ В Operating Temperature Range  $2 = -40^{\circ}$ C to  $+85^{\circ}$ C С Frequency Stability Over Operating Temperature  $1 = \pm 100 \text{ppb}$  $2 = \pm 50 \text{ppb}^{**} \text{Note:} \pm 50 \text{ppb}$ available only with -40°C to +85°C 1 = CMOSD **Output Waveform** 2 = Clipped Sine Wave

Example: TCXO2012S-UHS-19.440MHz-1-2-2-1

Frequency = 19.440MHz

Power Supply = 5V

Operating Temperature Range = -40°C to +85°C

Frequency Stability Over Operating Temperature = ±50ppb

Output Waveform = CMOS

Dynamic Engineers, Inc.

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside; such as data tables and graphs without notification to potential customers who may have earlier revisions in their possession.