

Dynamic Engineers Inc.

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

Features

Frequency Range 5 to 26 MHz 5 mm x 3.2 mm x 1.65 mm ceramic SMD ±2.5 ppm total aging over 20 years CMOS or clipped sine wave options ±0.280 ppm from -40°C to +85°C ±0.100 ppm from -20°C to +70°C

Typical Applications

Femtocells, GPS Receivers Mobile Radio System Clocks for wide range of applications

Description

The TCXO5300THP family offers low noise compensation techniques combined with aggressive conditioning processes resulting in outstanding long term frequency stability, tightly distributed performance parameters, and superior long term reliability

Mechanical Drawing & Pin Connections

H7 LC)' \$\$H< DSF Yj ' High Precision SMD VCTCXO

Picture of Part



Drawing No:MD140051-3



[Bottom View]



Pin	Function
#1	Vcon/Tri-state
#2	GND
#3	Output
#4	VDD

Unit : mm 1mm=0.0394inch

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Rev.1

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.



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Specifications

TCXO Specification		Sym	Condition	Value			Unit	Noto			
				Min.	Тур.	Max.	Unit	NOLE			
Operational Frequency Range		;	f ₀		5		26	MHz			
Output											
Load							15	pF			
H - level voltage		e	V _H		0.9Vcc			V			
	L – level voltage		VL				0.1Vcc	V			
	Rise and Fall time							ns			
	Duty Cycle				45		55	%			
Clipped	Level		L		0.8			pk-pk			
Sine Wave	Load Resistance	ce	RL			10		Kohm			
only	Load Capacita	acitance				10		pF			
Frequency of	ontrol										
Control Voltage Range		V	/c		0.5	1.5	2.5	V	Positive tuning slope		
Tuning Range					±5			ppm			
Vc Input Impedance					100			Kohm			
Power Supp	ly										
Voltage V		сс		3.135	3.300	3.465	V	5.0 option available			
Current Consumption		lo	cc				6.0 3.5	mA	Square wave Clipped sine wave		
Frequency S	Stability							1			
Vs.Temperature				-40°C to +85°C, ref +25°C	-0.28		+0.28	ppm			
Vs. 5% change in Supply Voltage				Ref V_{CC} typ.	-0.100		+1.00	ppm			
Tolerance at 25°C					-2.000		+2.000	ppm			
Total Aging – over 20 years				Projected after 30 days operation	-2.500		+2.500	ppm			
SSB Phase noise @10 MHz CMOS typical				100 Hz		-120		dBc/Hz			
				1 kHz			-140	dBc/Hz			
				10 kHz		-148		dBc/Hz			
Environmen	tal Conditions										
Storage temperature range -55			°C to -	+125°C							
Operating temperature range		-40	-40°C to+ 85°C standard available maximum range								



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Ordering Information

TCXO5300THP-XX.XXXXXX-W-Y-Z-V

- 1. Field "XX.XXXXXX" is the Output Frequency to six decimals in MHz
- 2. Field "W" is Operating Temperature Range and Frequency Stability
 - a. "0" for -20°C to +70°C and ±0.100 ppm b. "1" for -40°C to +85°C and ±0.280 ppm

 - c. "2" for -40°C to +85°C and ±0.500 ppm

***NOT all choices in section are available. Please contact Dynamic Engineers Inc. for further details regarding specific frequency and stability combination

- 3. Field "Y" is Power Supply Option
 - a. "0" for 5.0V ±5%
 - b. "1" for 3.3V ±5%
- 4. Field "Z" is Output Waveform Option
 - a. "0" for clipped sine wave
 - b. "1" for CMOS square wave
- 5. Field "V"
 - a. "0" for clock TCXO (no voltage control)
 - b. "1" for VCTCXO (voltage control on Pin1)

Part Number Example

TCXO5300THP-20.000000-2-1-0-0 This model denotes a Clock TCXO With 20MHz frequency Temperature Range of -40°C to +85°C and ±0.5000 ppm stability 3.3V ±5% Power Supply Clipped sine wave