

TCXO3407

Low Jitter Sine wave TCXO

Features

Frequency Range 30 to 180 MHz
Ultra Low jitter : 0.15 ps typical (12KHz to 20MHz BW)
Low power : 135 mW typical
10 dBm sine wave output
Less than +/- 1 ppm stability

Typical Applications

SONET / SDH / ATM
10 Gigabit Ethernet

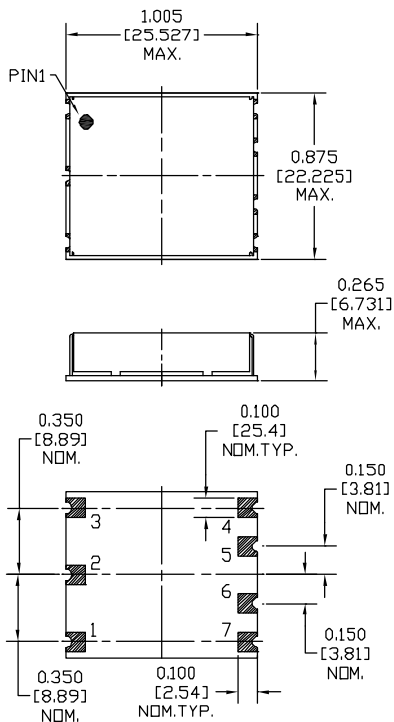
Description

The TCXO3407 employs low noise / low jitter temperature compensation techniques with 50-ohm sine wave output and less than 1 ppm temperature stability up to 180 MHz frequency operation. The device contains an internal voltage regulator for improved isolation from power supply ripple and added stability.

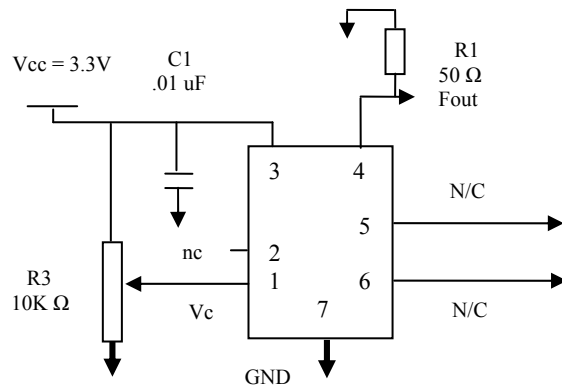
Picture of Part



Physical Dimensions



Pin Connections



Pin #	Connection
1	Vc
2	N/C
3	Vcc
4	Fout
5	N/C
6	N/C
7	GND

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Specification

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f_0		30		180	MHz	
	Load						pF	
	H - level voltage	V_H					V	
	L - level voltage	V_L					V	
	Rise & Fall time						ns	
	Duty cycle						%	
50 ohm Sine-wave ONLY	Level	L		8	10.5		dBm	
	Load Resistance	R_L	AC-coupled		50		ohm	
Power supply								
Voltage		V_{CC}		3.150	3.300	3.450	V	
Current consumption		I_{CC}				40	mA	
Frequency control*								
Control voltage range		V_C		0.0	1.3 1.7	3.3	V	Nominal Frequency between 1.3 and 1.7 volts on Vcontrol
Tuning range Slope				- 10		+10	ppm/v	
Vc Input Impedance				10			Kohm	
Frequency stability								
vs. temperature			-40°C to +85°C, ref 25°C	-1.0		+1.0	ppm	
vs. 5% change in supply voltage			ref Vcc typ.	-0.200		+0.200	ppm	
Tolerance at 25C				-0.1		+0.1	ppm	With 1.3 to 1.7 volts on Vcontrol
SSB Phase noise @ 100 MHz typical			10 Hz				dBc/Hz	
			100 Hz		-110			
			1 kHz		-135			
			10 kHz		-154			
			100 kHz		-160			
Phase Jitter (12K to 20MHz)					0.15	0.40	ps	
Aging	Per Year		Projected yearly aging after 30 days operation	-1.0		+1.0	ppm	
	10 years			-3.0		+3.0	ppm	
Environmental, mechanical conditions.								
Operating temperature range		-40°C to +85°C maximum range available that is standard						
Storage temperature range								
Mechanical shock								
Vibration								
Soldering								

Ordering Information

TCXO3407-XXX.XXXXXX-W

1. Field "XXX.XXXXXX" is the Output Frequency to six decimals in MHz
2. Field "W" is Operating Temperature Range and Freq. Stability :
 - a. "0" for 0 °C to +70°C and +/- 1.000 ppm
 - b. "1" for -40 °C to +85°C and +/- 1.000 ppm

Part Number Example

TCXO3407-100.000000-1

100MHz operating frequency to six decimal places

-40°C to 85°C with +/- 1.000 ppm