

Features

Wide Frequency Range 4 to 100 MHz
High Reliability Hermetically sealed DIP.
HCMOS or Clipped sine output

Typical Applications

Mobile Communications, Test Equipment
Aerospace

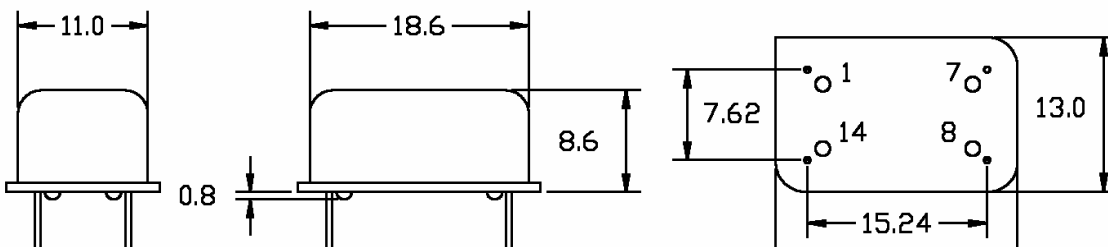
Picture of Part



Description

The TCXO3415 family offers a wide operating frequency range for a variety of applications where harsh environments may be encountered. The 3415 comes in a resistance welded hermetic sealed enclosure in an industry-standard DIP footprint.

Physical Dimensions & Pin Connections



Pin Connections:
1 Vcont.
7 Ground
8 Output
14 Vcc

Specification

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f ₀		4		100	MHz	
CMOS Square wave	Load				15		pF	
	Logic 1 Voltage			0.9V _{cc}			V	
	Logic 0 Voltage					0.1V _{cc}	V	
	Rise / Fall Time			3		10	NS	
	Duty Cycle			40	50	60	%	
Clipped Sine wave	Load					10	pF	**in parallel with 10K ohm
	Output Voltage		** Peak to Peak Amplitude	0.7			V	
Power supply								
Voltage		V _{cc}		3.135	3.300	3.465	V	5.0V option available
Current consumption		I _{cc}		2		15	mA	Dependent upon nominal frequency
Frequency control*								
Control voltage range (Electronic Adjust Option)		V _c		0.15	1.65	3.15	V	For 3.3 V supply option
Tuning range				+/- 5			ppm	
Frequency stability								
vs. temperature			-40°C to +85°C, ref 25°C	-1.500		+1.500	ppm	
vs. 5% change in supply voltage			ref V _{cc} typ.	-0.300		+0.300	ppm	
Calibration Tolerance at 25C				-1.000		+1.000	ppm	
SSB Phase noise @ 20 MHz (50-ohm sine) Typical			10 Hz			-90	dBc/Hz	@ 20 MHz (HCMOS) Typical
			100 Hz			-115		
			1 kHz			-135		
			10 kHz			-140		
Aging	Per Year		Projected yearly aging after 30 days operation	-1.0		+1.0	ppm	
Environmental, mechanical conditions.								
Operating temperature range		-40°C to +85°C maximum range available that is standard						
Storage temperature range		-55°C to +105°C						
Mechanical shock		MIL-STD 202 ; Method 213 ; Test Condition C						
Vibration		MIL-STD 202 ; Method 201 , 204, and 214						
Hermeticity		MIL-STD 202 ; Method 112						

Ordering Information

TCXO3415-XXX.XXXXXX-W-Y

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 -20°C to +70°C and +/- 1.000 ppm
 - b. "1" for -40°C to +85°C and +/- 1.500 ppm
3. Field "Y" is for Supply Voltage Choice :
 - a. "0" for 5.0 V supply
 - b. "1" for 3.3 V supply

Part Number Example

TCXO3415-100.000000-0-1
100.000000 MHz Operating Frequency
Operating Temperature of -20°C to +70°C
+/- 1.000 ppm Frequency Stability
3.3 V supply