

Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

Features and Benefits

Frequency Range from 5 MHz to 52 MHz 7.0 mm x 5.0 mm ceramic SMD package Up to ±0.5 ppm (depends on operating frequency and operating temperature) HCMOS and Clipped Sine Wave output 2.5V or 3.3V supply Low power consumption Compact and light weight Compatible for automatic assembly

Description

A new series of low power consumption temperature compensated crystal oscillators with the latest low noise integrated circuit topologies.

Typical Applications

WIFI/WiMAX, WLAN, Wireless Communications Base Stations, Femtocell Mobile phone

Mechanical Drawing & Pin Connections

Unit : mm 1mm=0.0394inch **Bottom View** 0.8±0.15 **Top View** 5.08±0.15 7±0.2 #3 #4 #4 #3 4±0.15 5±0.2 #2 #1 #2 #1 Side View 1.4±0.15 Pin Funttion VCON:VC-TCXO #1 GND/NC:TCXO #2 GND #3 Output #4 VDD

Drawing No:

MD160036-1

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Specifications

General Specifications							
Parameter		2.5V		3.3V			
		Min.	Max.	Min.		Max.	
Frequency Range		5MHz	52MHz	5MHz		52MHz	
Standard Frequency		5.000MHz, 6.400MHz, 8.000MHz, 8.192MHz, 10.000MHz, 12.500MHz, 12.800MHz,					
(for HCMOS)		16.000MHz, 16.384MHz, 19.440MHz, 25.000MHz, 26.000MHz, 40.000MHz					
Standard Frequency		8.000MHz, 8.192MHz, 10.000MHz, 12.500MHz, 12.800MHz, 16.000MHz,					
(for Clipped Sine Wave)		16.384MHz, 19.440MHz, 25.000MHz, 26.000MHz, 40.000MHz					
Frequency Tolerance*			+2 0ppm	_		+2 0ppm	
(at 25°C, 1 hour after reflow)		-	±2.0ppm	-		±2.0ppm	
Frequency Stability							
Vs Supply Voltage (+5%) change							
Vs Load (+10%) change		-	±0.1ppm	-		±0.2ppm-	
Vs Aging $(@1^{st} year)$		-	±0.2ppm	-		±0.2ppm	
		-	±1.0ppm	-		±1.0ppm	
Supply Voltage Variation		2.375\/	2 625\/ 3 135\/			3 465\/	
(V _{DD}) ±5%		2.0701	2.020 V	0.1001		0.400 V	
Supply Current							
Clipped Sine Wave		- 3.5mA		-		3.5mA	
HCMOS		-	- 6.0mA -			6.0mA	
Output Level		0.8Vp-p -		0.8Vp-r)	-	
(Clipped Sine Wave)		0.0.16.6					
Output Level (HCMOS)							
Output High (Logic "1")		2.25V	-	2.97V		-	
Output Low (Logic "0")		-	0.25V	-		0.33V	
Duty		45%	55%	45% 55%			
Load(Clipped Sine Wave)		10KΩ // 10pF					
Load (HCMOS)		15pF					
Control Voltage Range		0.5V	2.5V 0.5V			2.5\/	
		0.01	2.01	0.01		2.01	
Pulling Range (VCTCXO)		±5.0ppm	±12.0ppm	±5.0ppn	า	±12.0ppm	
Vc Input Impedance (VCTCXO)		100kΩ - 100kΩ -					
Phase Noise @ 19.2 MHz	100 Hz	-115dBc/Hz					
	1 kHz	-135dBc/Hz					
	10 kHz	-148dBc/Hz					
Start-up Time		2ms max.					
Storage Temp. Range		-55°C to +125°C					
Stability vs. Temperature Range Availability							
		Temperature Range	emperature Range				
Stability in ppm		-20°C to +70°C	-30°C to +85°C		-40°C to +85°C		
±0.5			Conditional (Conditional (depends on		Conditional (depends on	
(10-26MHz with pulling range		Available	operating free	operating frequency; case		operating frequency; case	
<8ppm available)			by case)	by case)		by case)	
±1.0		Available	Available	Available		Available	
HCMOS Output Level (HCMOS) Output Level (HCMOS) Output Level (HCMOS) Output Level (HCMOS) Output Low (Logic "1") Output Level (HCMOS) Duty Load(Clipped Sine Wave) Load (HCMOS) Control Voltage Range (VCTCXO) Vc Input Impedance (VCTCXO) Vc Input Impedance (VCTCXO) Vc Input Impedance (VCTCXO) Phase Noise @ 19.2 MHz 100 Hz 10 kHz 10 kHz Start-up Time Storage Temp. Range Stability in ppm ±0.5 (10-26MHz with pulling range <8ppm available)		0.8Vp-p 2.25V - 45% 0.5V ±5.0ppm 100kΩ 2ms max. -55°C to +125°C Stability vs. Tempe Temperature Range -20°C to +70°C Available Available	- 0.25V 55% 10KΩ / 15 2.5V ±12.0ppm - -115d -135d -148d rature Range Availa - available	- 0.8Vp-p 0.8Vp-p - 2.97V - - 45% // 10pF - ipF 0.5V ±5.0ppm 100kΩ iBc/Hz - iBc/Hz -		- 0.33V 55% 2.5V ±12.0ppm - - - to +85°C tional (depends on ing frequency; case te) ble	

Other customized specifications maybe available. Please contact Dynamic Engineers Inc. for further details.

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