

Dynamic Engineers Inc.

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

Features and Benefits

Frequency Range 1.5 MHz to 170 MHz 5.0 mm x 3.2 mm 6 pads ceramic SMD package ±25 ppm total stability over -20°C to +70°C available Available ±25 ppm total stability over -40°C to +85°C (depends on operating frequency) CMOS output 3.3V supply Tri-state enable / disable Available tight symmetry (45 to 55%)

Typical Applications

WiMax/WLAN xDSL/VoIP, cable modem Set-top Box, HDTV

Description

A new series of voltage controlled oscillators with the latest tight symmetry topologies.

Mechanical Drawing & Pin Connections

Drawing No:MD160025-1

J7LC)' \$\$G!7ACG!IA<n CMOS 1.5 to 170MHz

Voltage-Controlled Crystal Oscillator

Unit:mm 1mm=0.0394inch

[TOP VIEW]

[BOTTOM VIEW]







Pin#	Function	
1	Vcon	
2	Tri-State	
3	GND	
4	Output	
5	NC	
6	VDD	

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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

General Specifications			
Output Logic Type	CMOS		
Parameter	3.3V		
	Min.	Max.	
Frequency Range	1.5 MHz	170.0 MHz	
Standard Frequency	19.44MHz, 38.4MHz		
Control Voltage Range	0.3V	3.0V	
Supply Current			
$1.5 \text{ MHz} \le \text{Fo} \le 20 \text{ MHz}$	-	10 mA	
20 MHz ≤ Fo ≤ 50 MHz	-	20 mA	
50 MHz ≤ Fo ≤ 170 MHz	-	30 mA	
Supply Voltage Variation	2.07\/	2 62)/	
(V _{DD}) ±10%	2.97 V	3.03V	
Output Level			
Output "High" (Logic "1")	2.97V	-	
Output "Low" (Logic "0")	-	0.33V	
Rise Time (Tr)/Fall Time (Tf)			
(10% V _{DD} – 90% V _{DD})			
1.5 MHz ≤ Fo ≤ 20 MHz	-	5 nSec	
20 MHz ≤ Fo ≤ 50 MHz	-	4 nSec	
50 MHz ≤ Fo ≤ 170 MHz	-	3 nSec	
Tri-State (Input to Pin 2)			
Enable (High voltage or floating)	2.31V	-	
Disable (Low voltage or GND)	-	0.99V	
	±50 ppm over -20°C to +70°C or -40°C to +85°C		
Frequency Stability	±25 ppm over -20°C to +70°C		
	±25 ppm over -40°C to +85°C (depends on operating frequency; case by case)		
Phase Noise 100 Hz	-100dBc/Hz -133dBc/Hz -140dBc/Hz		
@ 38 40 MHz 1 kHz			
10 kHz			
Absolute Pulling Range (APR)	±50ppm min.		
Start-up Time	5ms max.		
Linearity	10% max.		
Modulation Bandwidth (BW)	15 kHz min		
1.5 MHz ≤ Fo ≤ 170 MHz			
Input Impedance	5000 KΩ min.		
Period Jitter (Pk-Pk)	40 pSec max.		
RMS Phase Jitter	1 nSec max		
(Integrated 12 kHz – 20 MHz)			
Aging (first year at 25°C)	±3 ppm max.		
Storage Temp, Range	-55°C to +125°C		

Stability vs. Temperature Range Availability			
	Temperature Range		
Stability in ppm	-20°C to +70°C	-40°C to +85°C	
±50	Available	Available	
±25	Available	Conditional (depends on operating frequency; case by case)	

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

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