

### Dynamic Engineers Inc.

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

#### **Features and Benefits**

Better than ±0.28PPM from -40°C to +85°C 10MHz low noise CMOS output 3.3V supply, 3mA maximum current Extended Temperature down to -55°C Option to add noise filter capacitor (33nF)

## **Typical Applications**

Mobile SATCOM Mobile Radio Harsh Environments Femto-cell

### **Mechanical Drawing & Pin Connections**

#### Drawing No:

MD150017-1





#1	Vc(EFC)						
#2	Do not connect						
#3	Do not connect						
#4	GND						
#5	OUTPUT						
#6	Tri-state or do not connec						
#7	Do not connect optional 33nF to the GN						
#8	Vdc						
Pha (opt	se noise reduction ional on request)						
#7	Phase noise filter (PHNF) with external capacitor Cap = 33nF						

Unit : mm

Foot print 3.7 To GND To GND #7 #6 #5 100nF #1 0.6 1.27



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## **Specifications**

Oscillator Specification	Sym	Condition	Value			Link	Nata
			Min.	Тур.	Max.	Unit	Note
Nominal Frequency	Fnom			10		MHz	
Output Wave Form				HCMOS			
Output High Voltage			0.9V <sub>DC</sub>				
Output Low Voltage					0.1V <sub>DC</sub>		
Output Load					15	pF	
Start up Time					2	ms	
Tri-state Function		Pin#6=0.7x V <sub>DC</sub> or open		Pin#5= Oscillation			
		Pin#6=0.3x $V_{DC}$ or GND	Р	Pin#5= High impedance			
Power Supply							
Supply Voltage	V <sub>cc</sub>			3.3		V	
Supply Current					3	mA	
Frequency Control*							
Control Voltage Range	Vc		0.5	1.5	2.5	V	
Tuning Range			+/-5			ppm	Positive slope
Input Impedance			100			Kohm	
Frequency Stability							
VS. Temperature		From -40°C to +85°C,			+/-0.28	ppm	
Ref(F <sub>MAX</sub> +F <sub>MIN</sub> )/2		From -55°C to -40°C,			+/-1.0	ppm	
Tolerance at +25°C					+/-0.5	ppm	
VS. Supply Voltage		+/-5% change at 25°C			+/-0.1	ppm	
VS. Load Change		+/-10% change at 25°C			+/-0.1	ppm	
Year Aging		First year			+/-1.0	ppm	
Short Term Stability ADEV		t=1 sec.			1X10 <sup>-10</sup>		
Phase Noise (typ.)		@1 KHz			-135		
		@10KHz			-150	dBc/Hz	
		@100 KHz			-155		
Environmental Conditions							
Parameter	Reference Std.			Test Condition			
Operating Temperature range		-40°C to +85°C					
Storage Temperature range	-55°C to +125°C						
Reflow Profiles	Per IPC/JEDEC-J-STD-020C			<=260°C over 10 sec. Max.			

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