Features and Benefits

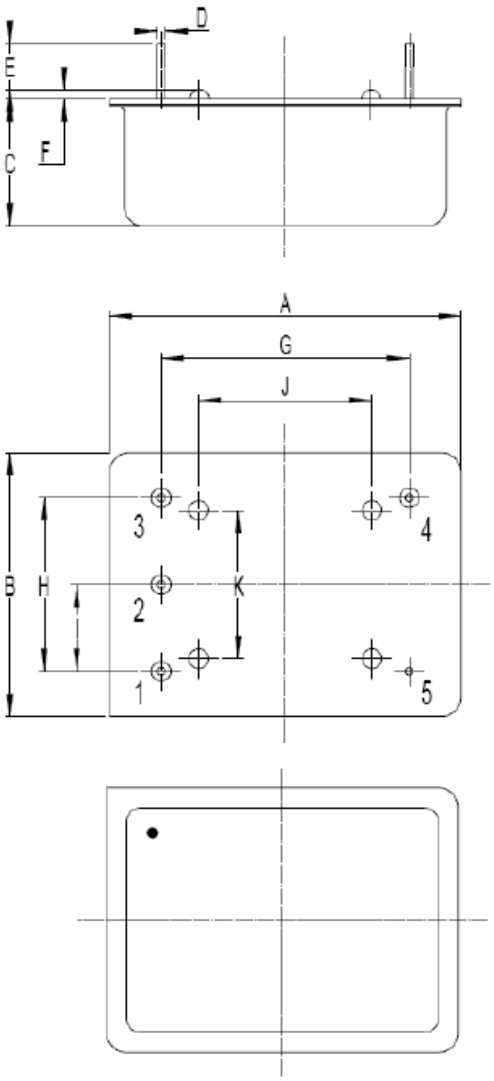
High stability : +/-2 ppb over -40°C to +85°C
HCMOS output
Phase noise :
100Hz offset ; better than -136dBc/Hz
1KHz offset : better than -142dBc/Hz
10KHz offset : better than -144dBc/Hz
3.3V power supply

Typical Applications

High End GPS Receiver System Reference
Test Instruments
SATCOM Ground / Mobile Stations

Mechanical Drawing & Pin Connections

Drawing No: MD150005-1



Pin Function:

Pin No.	Pin Function
1	VC
2	NC
3	VS
4	Output
5	GND

	Dimension (mm)	
Symbol	Min	Max
A		36.4
B		27.4
C		12.7
D	0.73	0.87
E	4.5	5.9
F	0.4	0.7
G	25.2	25.6
H	17.5	18.0
I	8.80	9.00
J	17.75 nominal	
K	15.21 nominal	

Specifications

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Nominal Frequency		F_0			40.000000		MHz	
Output	Wave Form				HCMOS 2.8V			
	Output Level "1"			2.4			V	
	Output Level "0"					0.4	V	
	Duty Cycle			45	50	55	%	
	Load	R_L		10			Kohm	
		C_L				8	pF	
	Rise&Fall Time					5	ns	
	Sub-harmonics Level		$F_{SH}=f_0+/-(n*f_0/3)$ n=1,2,3			-40	dBc	
Power Supply								
Input Voltage		V_{CC}		3.15	3.3	3.45	V	
Warm-up Current			Vcc=3.3V	900		1100	mA	
Steady State Current			at +25°C			450	mA	
Frequency warm-up time			To △f/f=1e-7 at +25°C			180	sec.	
Frequency Control*								
Input impedance					11		kOhm	
Voltage Range		V_c		0		2.8	V	
Factory Set Control Voltage		V_{co}	Disconnect V_c pin	1.1	1.4	1.7	V	
Slope					positive			
Frequency Turning Range		(fL-f)/f	V_c = 0V			-0.35	ppm	
		(f-f)/f	$V_c = V_{co}$		0		ppm	
		(fH-f)/f	$V_{c=} V_{ref}$	0.35			ppm	
Reference Voltage		V_{ref}		2.7	2.8	2.9	V	
Output Resistance of V_{ref}					91		Ohm	
Frequency Stability								
VS. Temperature			-40°C to +85°C ref 25°C			+/-2	ppb	
Tolerance At 25°C			At +25°C, $V_c=V_{co}$	-0.1		+0.1	ppm	
VS. Supply Voltage			Ref V_{cc} typ.			+/-1	ppb	
Aging	Per day		after 30days of operation			+/-0.2	ppb	
	Per year					+/-0.02	ppm	
Phase noise			10 Hz		-115		dBc/Hz	
			100 Hz		-136			
			1 KHz		-142			
			10 KHz		-144			
			100KHz		-153			
Environmental Conditions								
Operating temperature range		-40°C to +85°C						
Storage temperature range		-60°C to +90°C						
Humidity		Hermetically sealed						
Mechanical Shock		Per MIL-STD-202, Method 213B, test condition C, 100G, 6ms, half-sine						
Vibration		Per MIL-STD-202, 20G 10Hz to 2000Hz						
Washing Conditions		Washing with water or alcohol based detergent allowed only with final enough drying stage						
Soldering Conditions		Hand solder only – not reflow compatible 260℃ 10s(on pins)						