



### Features and Benefits

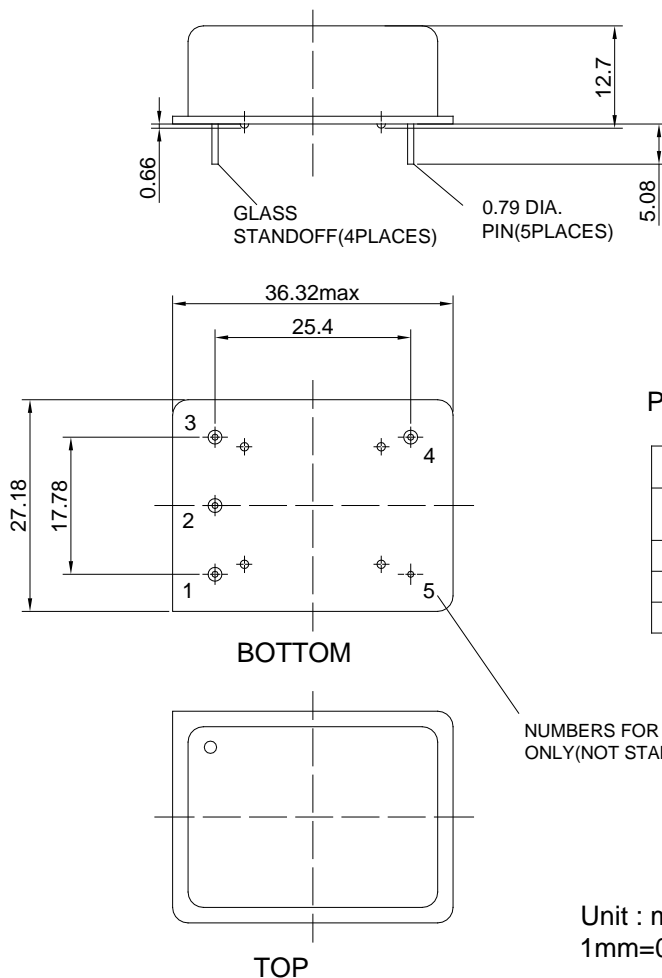
- HCMOS output
- Phase noise :
  - 100Hz offset ; better than -140dBc/Hz
  - 1KHz offset : better than -150dBc/Hz
  - 10KHz offset : better than -155dBc/Hz
- 5V power supply

### Typical Applications

- High End GPS Receiver System Reference
- Test Instruments
- Rubidium Standard Replacement
- SATCOM Ground / Mobile Stations

### Mechanical Drawing & Pin Connections

Drawing No: MD150005-2



#### Pin Function:

1	VCO INPUT or NOT CONNECTED
2	REFERENCE VOLTAGE or N.C. or OVEN MONITOR
3	+VDC
4	R.F.OUTPUT
5	0 VOLTS & CASE

NUMBERS FOR REFERENCE ONLY(NOT STAMPED ON UNIT)

Unit : mm  
 1mm=0.03937inch



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F <sub>nom</sub>			10.000000		MHz	
Initial Accuracy		@ +25 +/-1°C, after turn on power 10 minutes >=90days following data code	-0.1		+0.1	ppm	
Waveform			Rectangular				
Level			HCMOS				
"1" level			+2.6			V	
"0" level					+0.4	V	
Load				15		pF	
Duty cycle		@ 1.65V	40	50	60	%	
Rise/fall time		10% to 90%			10	ns	
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>		+4.75	+5	+5.25	V	
Supply Current		@ turn on			800	mA	
Steady state		After 5 minutes warm-up @25°C			300	mA	
<b>Frequency Stability</b>							
Holdover		@ 24 hours			80	us	
		@ 48 hours			160	us	
Ambient		-20°C to +70°C ref. +25°C	-3		+3	ppb	
Aging		per day, at time of shipment	-0.5		+0.5	ppb	
Aging(daily)			-0.5		+0.5	ppb	
Aging(yearly)			-50		+50	ppb	
Voltage		+/-5% change	-20		+20	ppb	
Short term		root Allan variance			0.01	ppb/s	
Load		+/-5% change	-20		+20	ppb	
Warm-up		in 5 minutes @ +25+/-1°C ref. 1hours	-100		+100	ppb	
SSB Phase noise (typ.)		10 Hz			-125	dBc/Hz	
		100 Hz			-140		
		1 KHz			-150		
		10 KHz			-155		
<b>Environmental Conditions</b>							
<b>Parameter</b>	<b>Reference Std.</b>		<b>Test Condition</b>				
Operating temperature range	-40°C to +85°C						
Storage temperature range	-40°C to +90°C						
Shock(non-operating)	MIL-STD-202, Method 213, Test Condition J		30g, 11ms, half-sine				
Vibration	MIL-STD-202, Method 201		0.06" Total p-p, 10 to 55 Hz				
Humidity	MIL-STD-202, Method 103, Test Condition B		95% RH @ +40° C, non-condensing, 96 hours				