Phase Matrix, Inc.™
Technology You Can Count On

High Speed Clocks

DIFFERENTIAL SINEWAVE SOURCES

HSC-2000-FD
HSC-2500-FD

Features

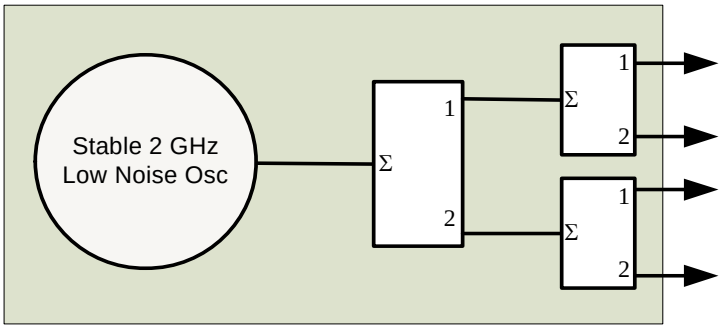
- **Operating frequency: 2 GHz or 2.5 GHz**
- **Dual Differential Output**
- **Output Power (50 Ω Load): 0 dBm Min Each Port**
- **+/- 25ppm Stability**
- **Low Phase Noise: < -125 dBc/Hz @10 KHz**
- **Low Power Consumption**
- **Hermetically Sealed SMT**
- **2.5" x 1.5" x 0.35"**

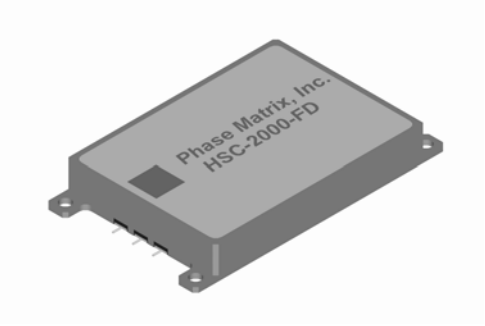
Applications

- **High Stability Source**
- **Clock for High Speed ADC**
- **Instrumentation**
- **Low Noise S-band Source**

General Description

The HSC-2000-FD and HSC-2500-FD high speed clocks are differential sine wave sources with exceptional frequency stability and low noise floor. It has a small foot print and is available in SMT and Coaxial output versions. This clock is particularly suitable for emerging digital high speed applications. With the speeds of the commercially available ADCs reaching 2 GHz and above, this clock provides a unique solution simultaneously providing frequency stability, low noise in a small package requiring low power consumption.





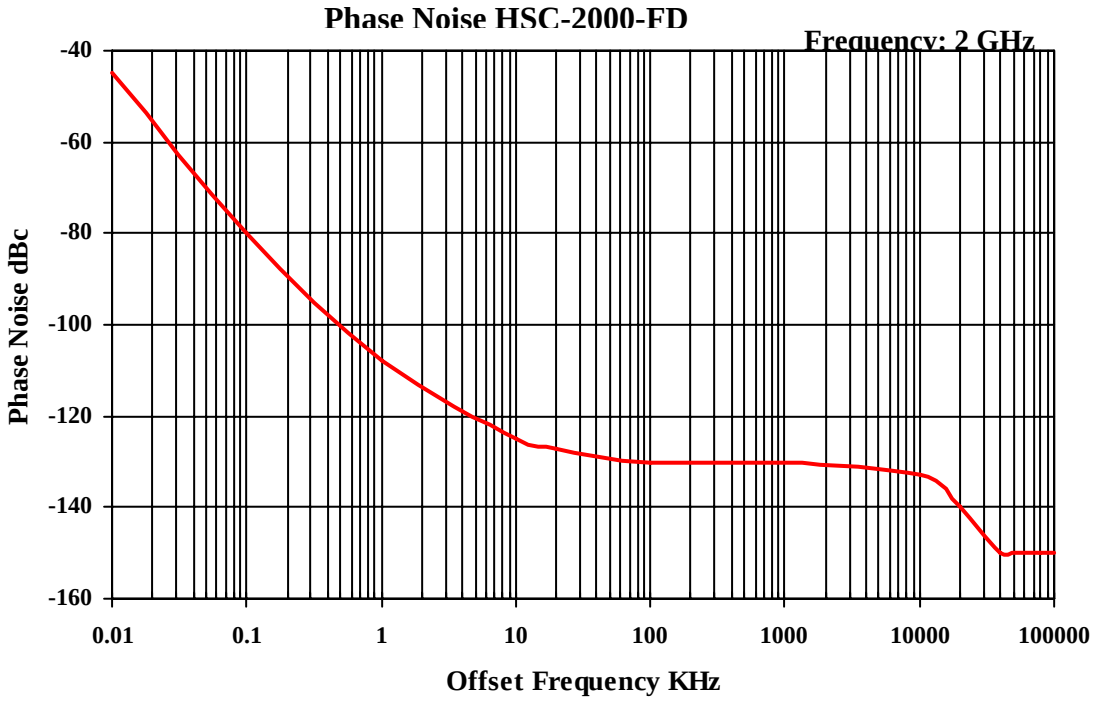
HSC-2000-FD Absolute Maximum Ratings

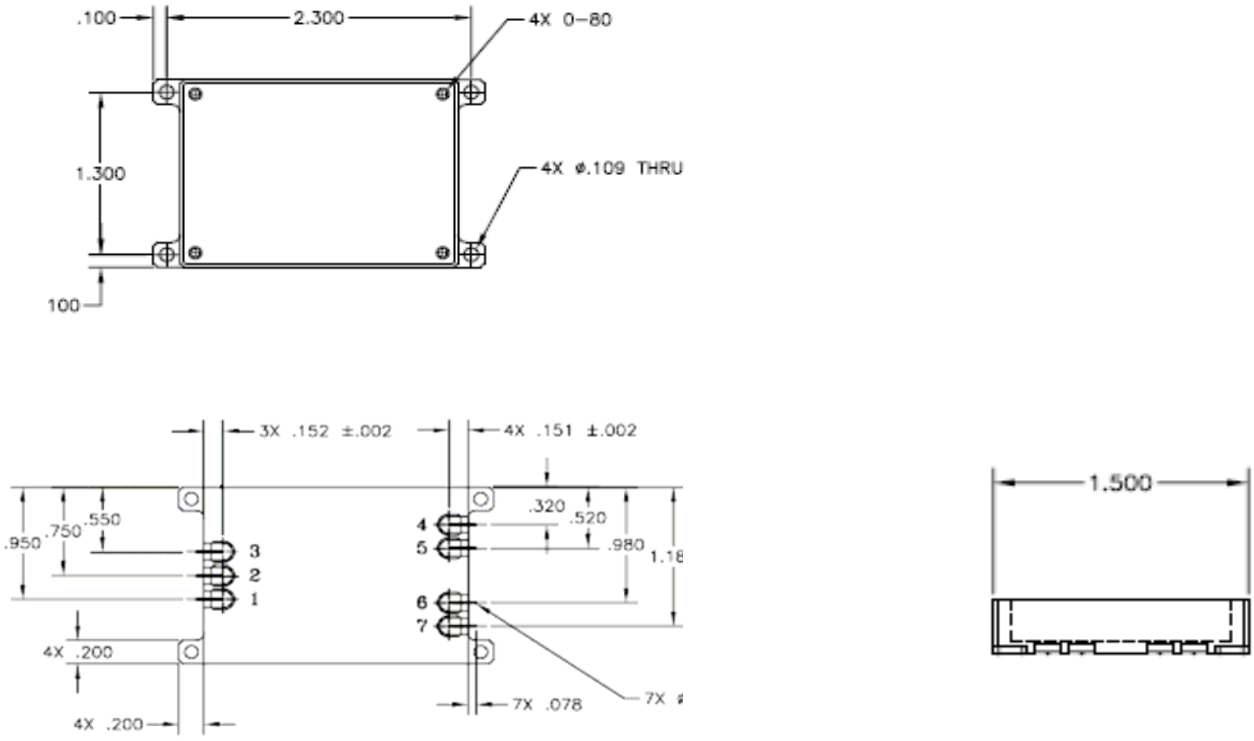
Parameter	Units	Ratings
Positive Supply Voltage	V	6
Operating Temperature	°C	-10 to 85
Storage Temperature	°C	-40 to +125

HSC-2000-FD Summary Electrical Specifications, 0° C to 70° C

Parameter	Units	Min	Typ	Max
Frequency	GHz		2 or 2.5	
Output (50 Ω Load)				
Power	dBm	-2		4
Voltage p-p	V	0.5		1
Power Balance	dB			2
Phase Balance	Deg			10
Output Return Loss	dB	12	14	
Second Harmonic (Below Carrier)	dBc			-15
Third Harmonic (Below Carrier)	dBc			-20
Spurious Output (Below Carrier)	dBc			-60
Phase Noise @ from F_o				
1 KHz	dBc / Hz		-105	
10 KHz			-125	
100 KHz			-130	
10 MHz			-130	
100 MHz			-150	
Frequency Drift over Temperature, bias and load variations and aging	ppm			±25
Positive Supply Voltage	V	4.8	5	5.2
Positive Supply Current	mA		250	

Contact Factory for any changes in specifications.





Package Mechanical Dimensions (Inches)

Part Number Ordering Information

Part Number
HSC-2000-FD
HSC-2500-FD

For more information:
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Data subject to change