

HD25084

3-300MHz Phase Detector with Loop Filter

Features

- Frequency Range: 3 to 300MHz
- Input Power: -10 to +17dBm
- Integrated Loop Filter
- Directly Interface to FPS Series
- Directly Interface to VCO Series
- DC Power: 12V
- SMA Connector



Description

HD25084 is a Phase/Frequency Detector with integrated Loop Filter. It operates with input frequency range from 3MHz to 300MHz, easy to use for Phase Locked Loop application.

Electrical Specifications @ +25 °C, $Z_S = Z_L = 50$ Ohms

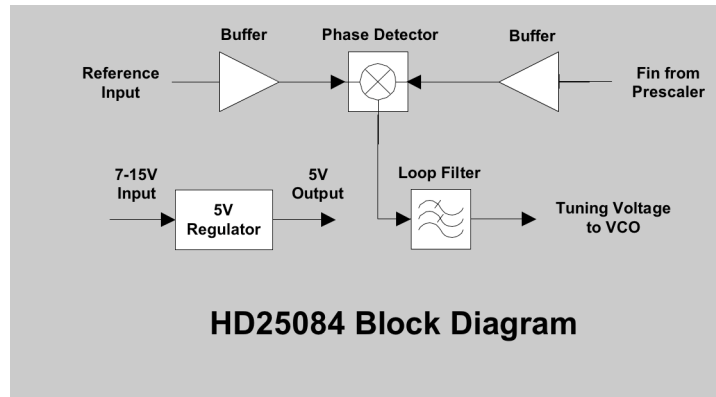
Parameter	Unit	Minimum	Typical	Maximum
Fin and Ref Input Frequency Range	MHz	3		300
Input Power Level	dBm	-10		+17
*Phase Noise @1KHz Offset With FPS-80-8 and VCO-2050 Fo=2000MHz, Ref=25MHz	dBc/Hz		-85	
*Phase Noise @1KHz Offset With FPS-12-13 and VCO-3300 Fo=3300MHz, Ref=275MHz	dBc/Hz		-89	
Loop Filter Bandwidth	KHz		10	
Tuning Voltage Output Range	V	0.1		4.9
Input/Output VSWR			1.20:1/1.20:1	
DC Power Supply	V	7	12	15
Supply Current	mA		175	

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* Phase Noise depends on VCO, reference and loop.

Block Diagram



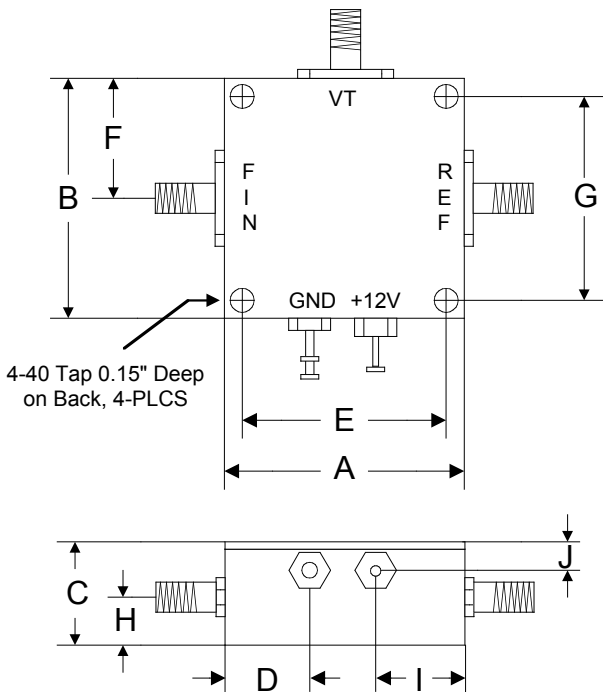
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Absolute Maximum Ratings

Parameter	Absolute Maximum
RF/REF Input Power	+20dBm
Supply Voltage	+16V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C

Outline



Port Frequency Input (Fin) connects to RF output frequency after Prescaler output
 Port Reference Input (Ref) connects to Signal Generator or other frequency source
 Port Voltage Tuning (VT) connects to Voltage Controlled Oscillator tuning input

	A	B	C	D	E	F	G	H	I	J
Inch	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
mm	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76