Digital Variable Attenuator

PRODUCT DATASHEET RFDVA30

Features:

- RF Frequency: DC-30 GHz
- Attenuation: 0-9 dB
- Input Return Loss: 15 dB +
- Output Return Loss: 15 dB +
- DC drain bias voltage: 4 V / -4 V
- 0.1um GaAs pHEMT Technology
- Die Size: 0.9 mm*1.45 mm

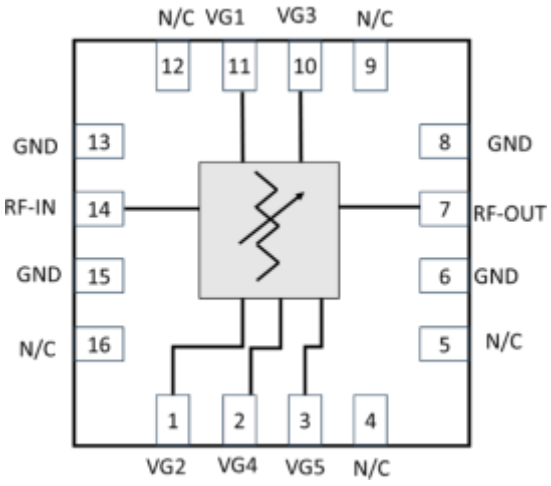
Applications:

- RF test and measurement setups.
- Calibration and protection of sensitive RF equipment.
- Communication, RADAR, and Satellite systems.

Deliverables:

- Sample Ready Die
- Product Datasheet

Functional Block Diagram:



Pin Configuration:

Pin No.	Pin Name	Description
6,8,13,15	GND	Ground
11	VG1	Control Voltage
1	VG2	Control Voltage
10	VG3	Control Voltage
2	VG4	Bias Voltage
3	VG2	Bias Voltage
5,9,12,16	N/C	Not Connected
14	RF-IN	RF Input
7	RF-Out	RF Output

Description:

RFDVA30 is a Digital Variable Attenuator that operates from DC-30 GHz, and it is used to drive the Lowest insertion loss Attenuator. The Attenuator provides Insertion Loss at 0- 9 dB. The input and output are matched to 50 ohms with on-chip DC blocking capacitors.

The device is specifically designed for use in the DC-30 GHz frequency in Bluetooth, Zigbee, WiFi, IoT and SATCOM Application.

The Technology used to design the Digital Variable Attenuator is a 0.1um GaAs pHEMT Process.

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Electrical Specification:

Freq= DC-30 GHz, VG = 4V/-4V, Zo=50 Ω

Parameters	Frequency	Units	Typ	Attenuation Error (dB)
Attenuation	16 GHz	dB	2.2	2.2
			3.2	0.2
			5.8	0.2
			7.8	1.2
Input Return Loss	16 GHz	dB	13	
			16	
			18	
			22	
Output Return Loss	16 GHz	dB	16	
			15	
			17	
			15	
Control Voltage (VCC)	-	V	4 / -4	

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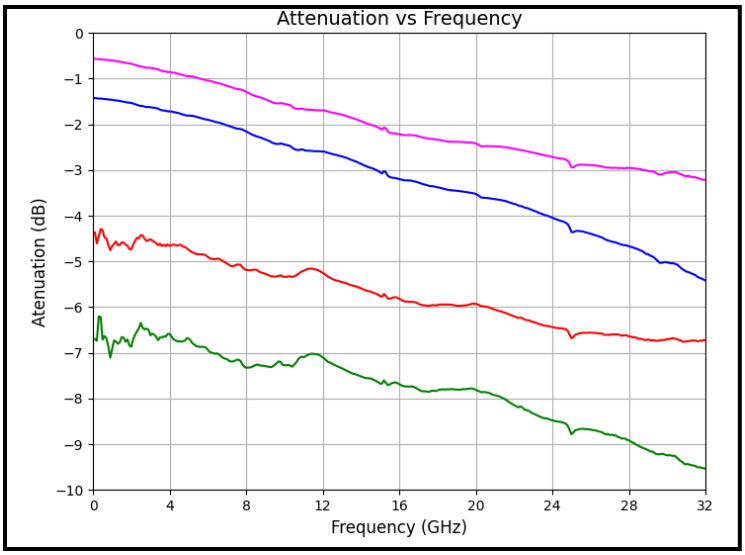
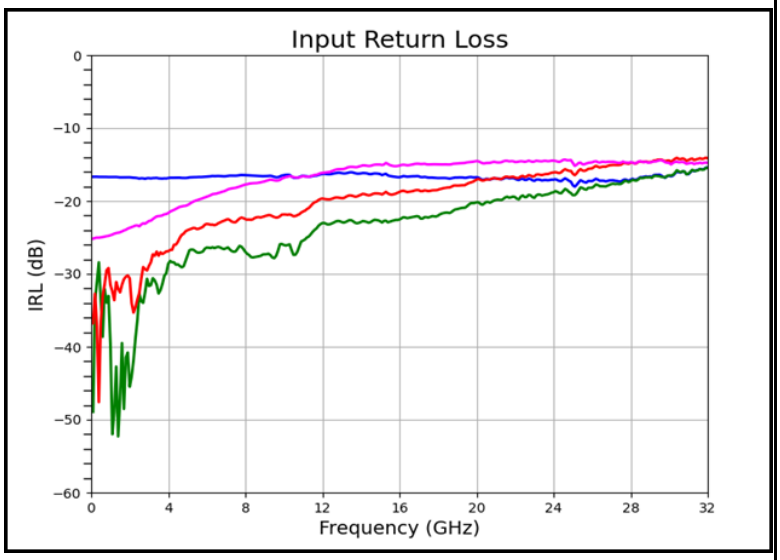
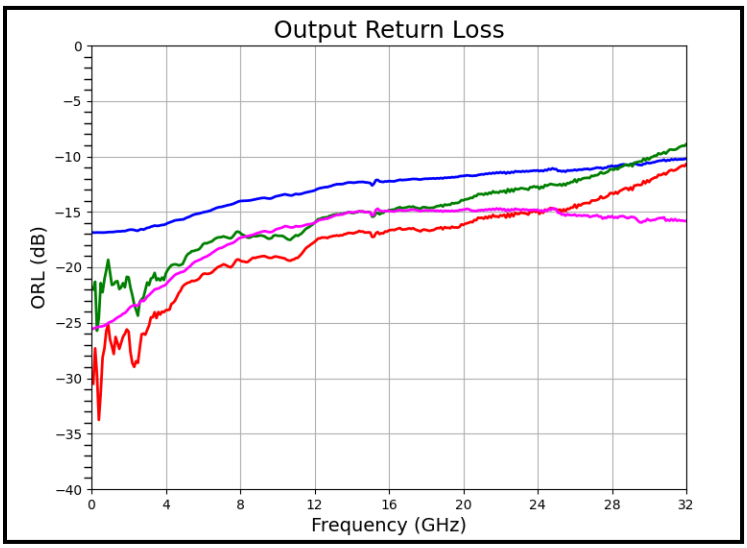
Wafer Level Measured Results:

0 dB 3 dB 6 dB 9 dB







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