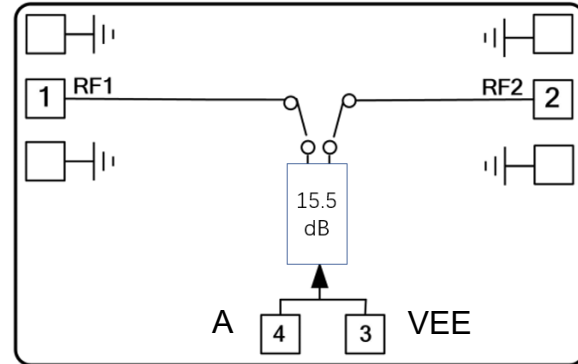


Features

- Frequency: DC-20GHz
- IL: 1.4dB typ.
- Att. Range: 15.5dB
- Control bits: 1bit
- Input /Output Return Loss: 20dB typ.
- Control Level: TTL /LVTTTL +3.3V/5.0V
- TTL/LVTTTL Driver Integrated
- Die Size: 1.014 x 1.164 x 0.1 mm


Typical Applications

- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

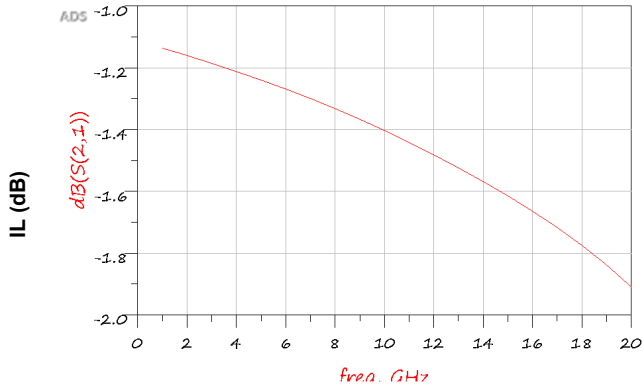
Electrical Specifications

TA = +25°C, VEE = -5V

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	DC-6			6-18			18-20			GHz
IL	0.9	0.9	1.0	0.9	1.1	1.3	1.3	1.4	1.5	dB
ATT Range	15.6	15.7	15.8	15.5	15.6	15.6	15.6	15.5	15.4	dB
Attenuation accuracy	±0.2dB									dB
Input RL		20			20			20		dB
Output RL		20			20			20		dB
Input P1dB	24 (typ.)									dBm
Switch time	30 (typ.)									ns

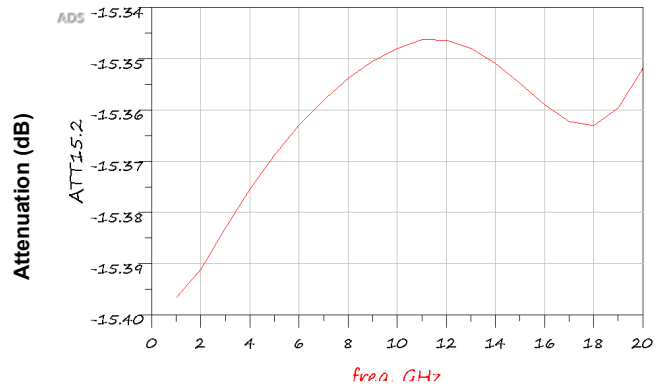


IL vs. Frequency



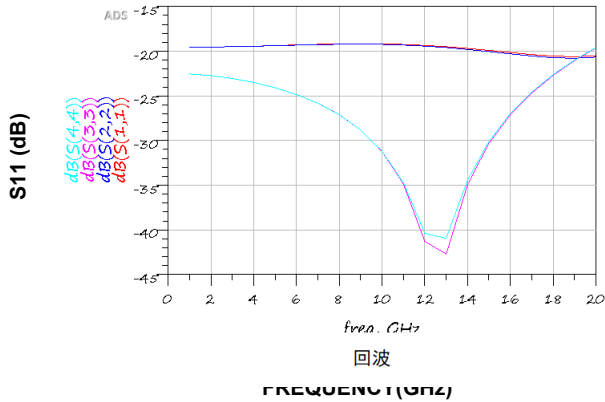
FREQUENCY(GHz)

Att. vs. Frequency



FREQUENCY(GHz)

Input RL vs. Frequency

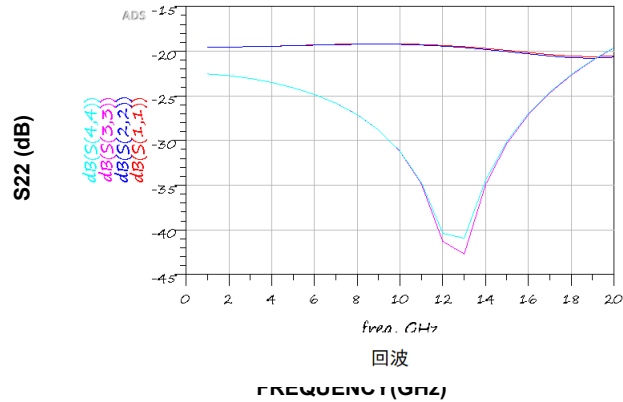


Additional phase shift vs. Frequency

Additional phase shift (deg.)

FREQUENCY(GHz)

Output RL vs. Frequency



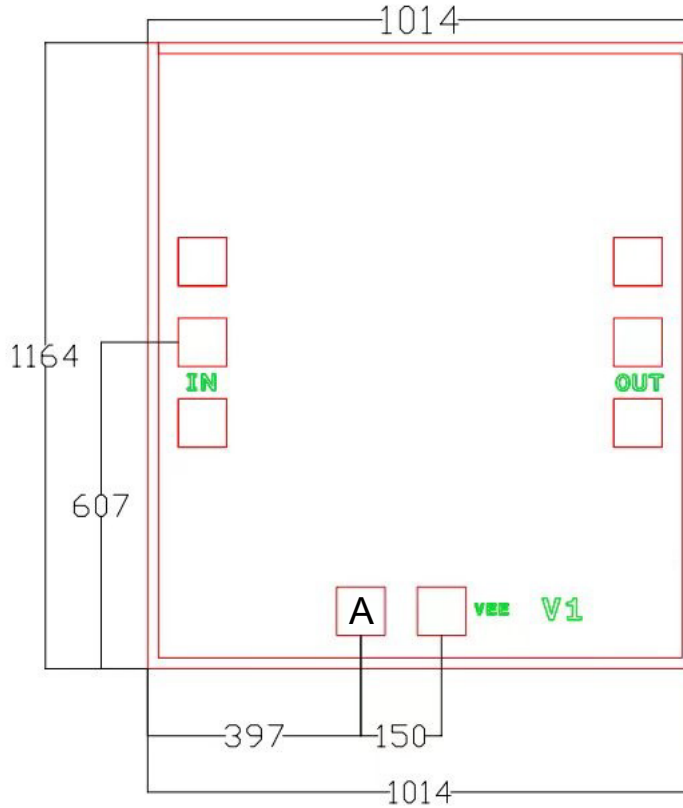
Attenuation accuracy vs. Frequency

Attenuation accuracy (dB)

FREQUENCY(GHz)



Outline Drawing:
All Dimensions in mm

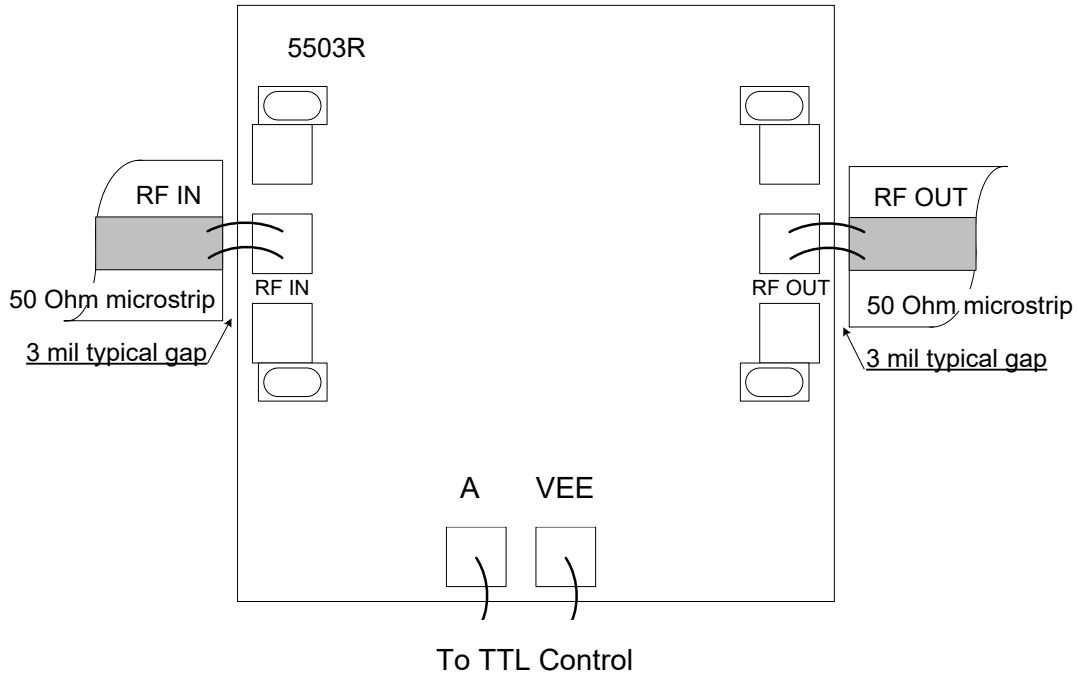


Pad	Function	Description
1,2	IN, OUT	50ohm circuit matched, and there is no blocking capacitor integrated inside the chip
3,4	A, VEE	Control pins , Power Supply
Bottom of chip	GND	The bottom of the chip should be in good contact with the RF and DC ground

Status	A	VEE
Reference	0V (TTL / LVTTTL 0)	-5V
15.5dB	+5V / +3.3V (TTL / LVTTTL 1)	-5V



Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm^2
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads
7. Internal DC Block at both input and output.
8. Input/Output use two 25um gold wire, length less than 250um is recommended.

Maximum Ratings:

1. Input power: +24dBm
2. Operating temperature: -55°C to +85°C
3. Storage temperature: -65°C to +150°C