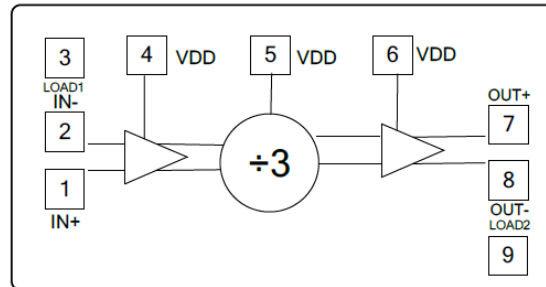


Features

- Frequency: DC-10GHz
- Output Power: -3.5dBm
- Single Power Supply: +4.5V/54mA
- Output Signal Duty Cycle: 50%
- Die Size: 2.1 x 0.82 x 0.1 mm

Functional Block Diagram

Typical Applications

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

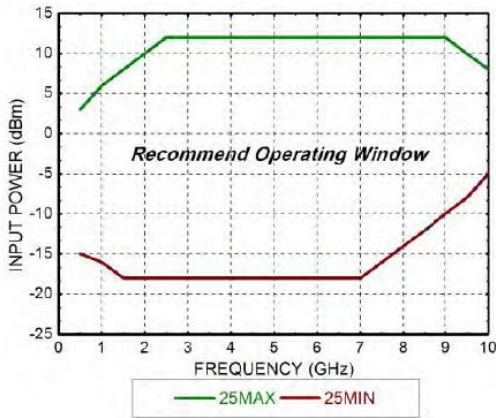
Electrical Specifications

TA = +25°C, VDD = +4.5V, IDD=54mA

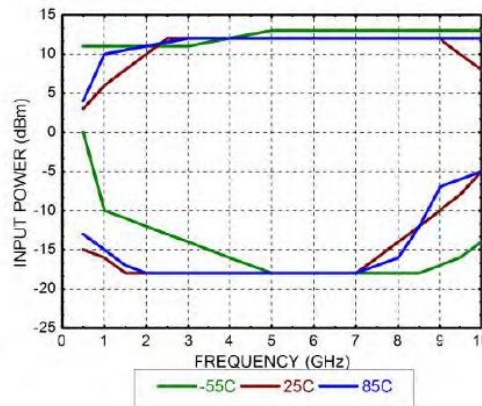
Parameters	Condition	Min.	Typ.	Max.	Units
Maximum Input Frequency			10		GHz
Minimum Input Frequency	Sine Wave*		0.6		GHz
Input Power	f _{IN} =1-7GHz	-18	0	+12	dBm
	f _{IN} =8-10GHz	-10	0	+10	dBm
Output Power	f _{IN} =1-7GHz	-4	-3.5		dBm
	f _{IN} =11-12GHz	-6	-4.5		dBm
Single sideband phase noise@100kHz offset	P _{IN} =0dBm, f _{IN} =6GHz		-140		dBc/Hz
Reverse Leakage	OUT+,OUT-, Terminated		52		dB
Operating Current (IDD)			54		mA

*if input signal is square wave, then the divider can work at DC.

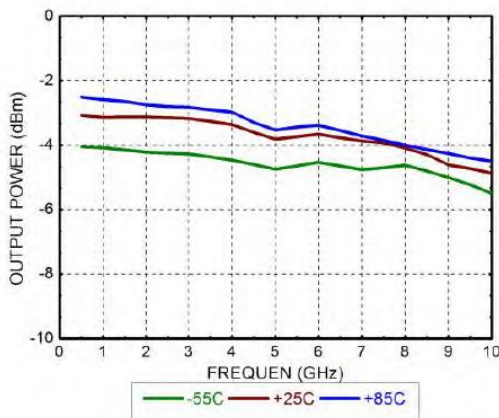
Input sensitivity window, T=25°C



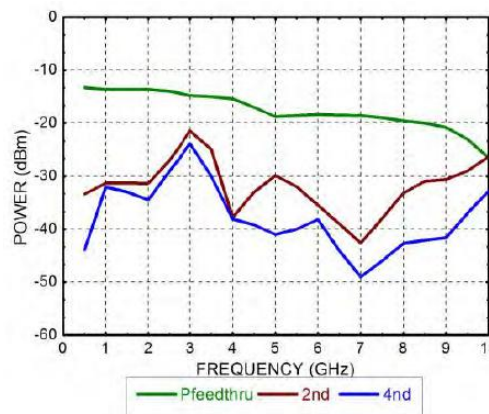
Input sensitivity window vs. Temperature



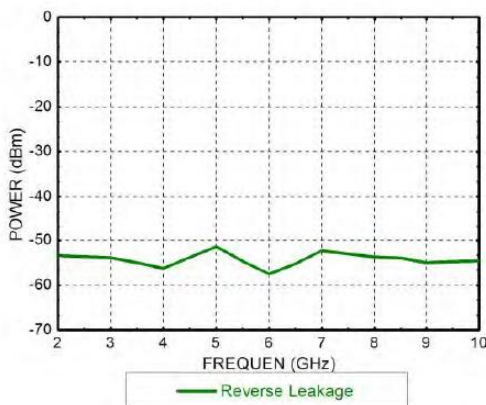
Output Power vs. Temperature



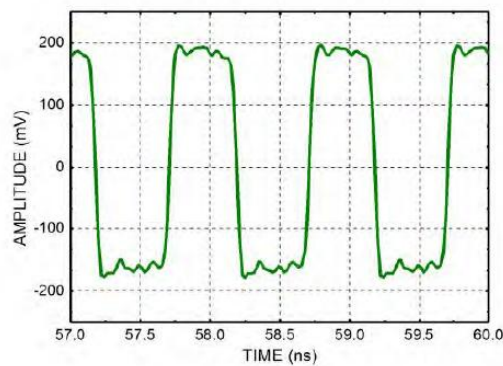
Output Harmonic, Pin=0dBm, T=25°C



Reverse Leakage, Pin=0dBm, T=25°C

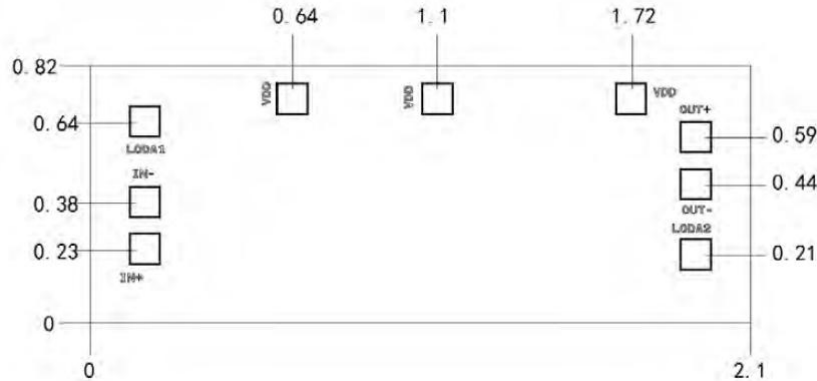


Output Waveform, Fout=1GHz, Pin=0dBm, T=25°C





Outline Drawing:
All Dimensions in mm

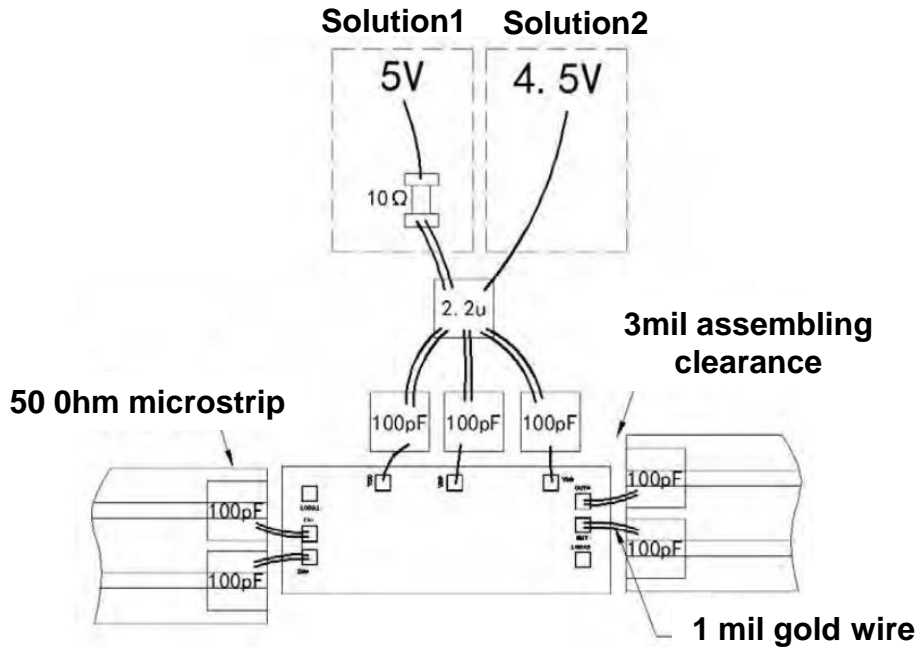


Pad Description

Pad	Function	Description
1	IN+	RF input, external DC blocking capacitor required.
2	IN-	RF input, external DC blocking capacitor required. 180° phase difference with Pad1.
3	LOAD1	50Ω matched, when Pad2 not used, connect it with Pad3
4,5,6	VDD	Power supply +4.5V, external bypass capacitor required.
7	OUT+	Divided signal output, external DC blocking capacitor required.
8	OUT-	Divided signal output, external DC blocking capacitor required. 180° phase difference with Pad7
9	LOAD2	50Ω matched, when Pad8 not used, connect it with Pad9
Die bottom	GND	Die bottom must be connected to RF/DC ground.



Assembly Drawing



- Solution2 is recommended, 4.5V power supply.
- For single-ended input, connect Pad2 and Pad3 with gold bonding, signal input from Pad1
- For single-ended output, connect Pad8 and Pad9 with gold bonding, signal output from Pad7

Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. Maximum drain voltage: +5V
2. Operating temperature: -55°C to +85°C
3. Storage temperature: -65°C to +150°C