BSTLM09-0812S

8 - 12GHz limiter chip

Data Sheet

I. Product Introduction

BSTLM09-0812S is a limiter chip with an insertion loss of less than 0.3dB within its operating frequency band and a limiting level of 15dBm. The chip has a power tolerance of 20W and no DC-blocking capacitors at its input and output ports.

II. Application Areas

- Communication
- Radar

III. Key technical indicators

- Frequency range: 8 - 12 GHz
- Insertion loss: 0.3dB
- Power consumption: 20W (CW)
- Limiting level: 15dBm
- Chip size: 1.38mm x 0.92mm

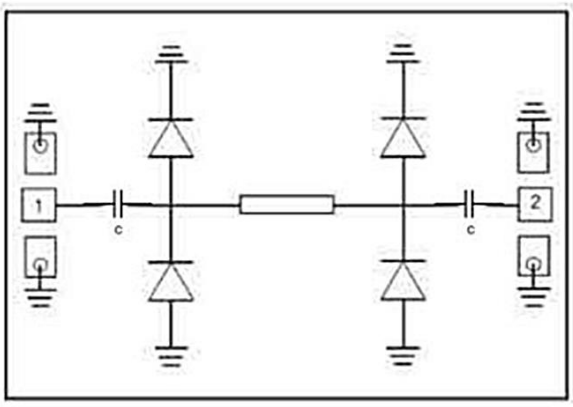

Figure 1. BSTLM09-0812S functional block diagram

IV. Absolute Maximum Ratings

Table 1.

PARAMETER	VALUE
Maximum input power	+43dBm (CW)
Operating temperature	-55 ℃ ~85 ℃
Storage temperature	-65 ℃ ~175 ℃

V. Electrical performance parameters (T_a = + 25 °C)

Table 2.

INDEX	MINIMUM	TYPICAL VALUES	MAXIMUM	UNIT
Frequency range	8–12			GHz
Insertion loss		0.3		dB
Return loss		15		dB
Clipping level		15		dBm

VI. Typical test curve

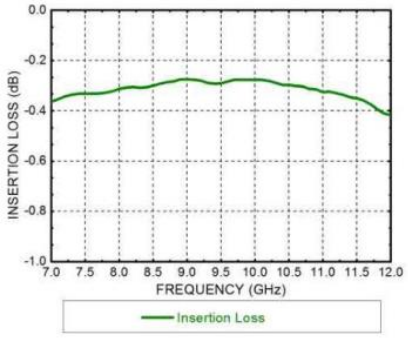

Figure 2. Insertion loss

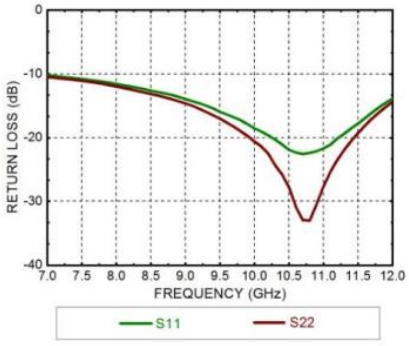

Figure 3. Return loss

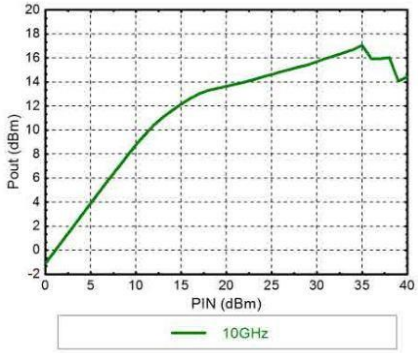

Figure 4. Clipping level

VII. Physical parameters

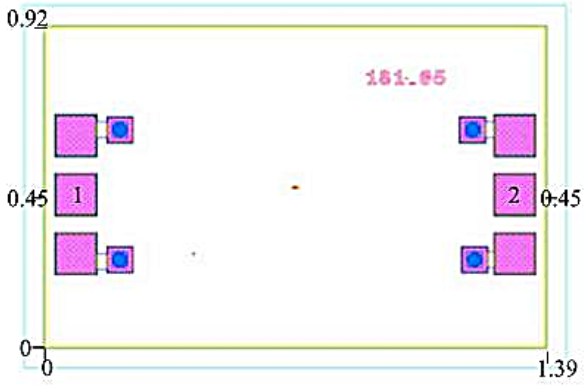

Figure 5.

VIII. Notes

- The chip should be stored in a dry, nitrogen environment and used in an ultra-clean environment.
- GaAs material is brittle and the chip surface cannot be touched. Be careful when using it.
- Sinter the chip with alloy (the alloy temperature cannot exceed 300 ℃ and the time cannot exceed 30 seconds) to ensure that it is fully grounded.
- The gap between the chip microwave port and the substrate should not exceed 0.05mm. Use 25μm double gold wire bonding. The recommended gold wire length is 250 to 400μm.
- There is no DC blocking capacitor at the microwave end of the chip.
- The chip is sensitive to static electricity. Please pay attention to anti-static during storage and use.