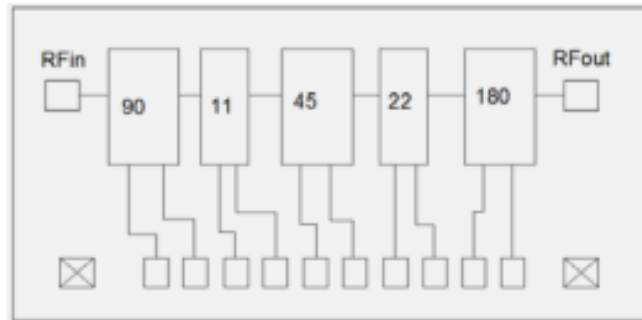


Features

- Frequency: 15-18GHz
- Phase Shift Accuracy: 2.7°
- Insertion Loss: 11dB
- Input/Output: 50Ω
- Die Size: 3.5 x 1.6 x 0.1 mm

Functional Block Diagram

Typical Applications

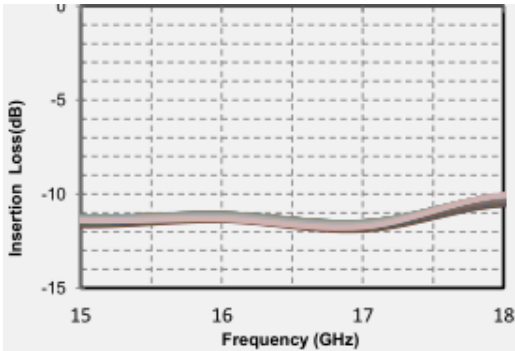
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications
TA = +25°C

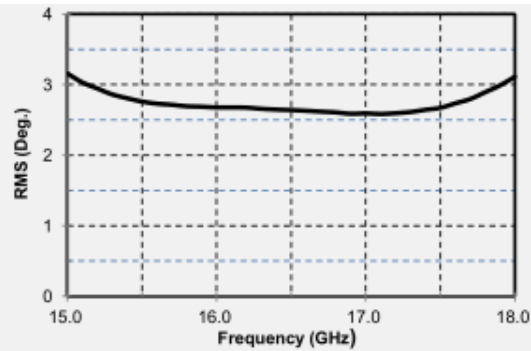
Parameters	Min.	Typ.	Max.	Units
Frequency	15-18			GHz
Insertion Loss	10.5	11	12	dB
Insertion Loss Fluctuation	±0.75			dB
Phase Shift Accuracy (RMS)		2.7		Degree
Input Return Loss	11	15	-	dB
Output Return Loss	11	14	-	dB



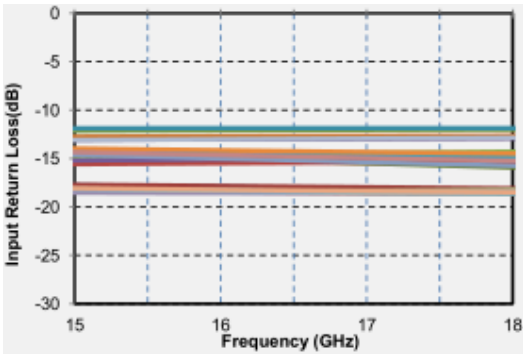
Full State Phase Shift Insertion Loss vs. Operating Frequency



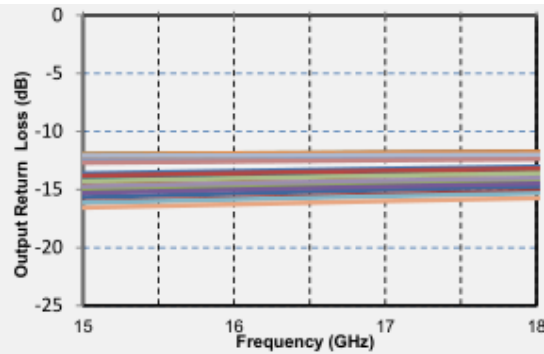
Phase Shift Accuracy (RMS)



Full State Phase Shift Input Return Loss vs. Operating Frequency

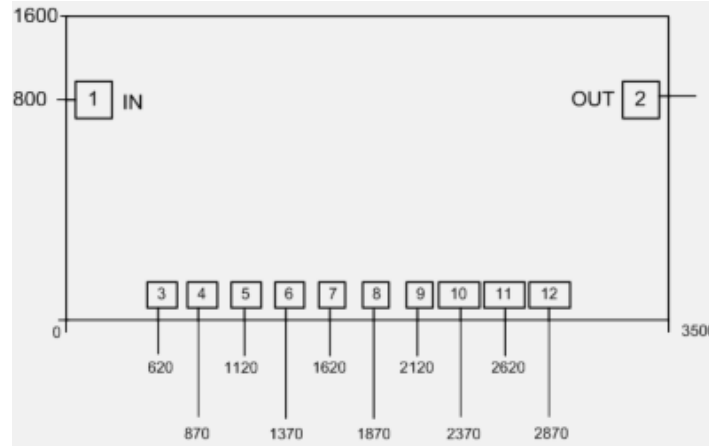


Full State Phase Shift Output Return Loss vs. Operating Frequency





Outline Drawing:
All Dimensions in μm



Pad Description

PAD	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal.	RF IN
2	RF OUT	RF signal output terminal.	RF Out
Die bottom	GND	Die bottom must be connected to RF/DC ground.	



Truth Table

Phase Shift Degree	3	4	5	6	7	8	9	10	11	12
0°	0V	-5V	-5V	0V	-5V	0V	0V	-5V	-5V	0V
11.25°	0V	-5V	0V	-5V	-5V	0V	0V	-5V	-5V	0V
22.5°	0V	-5V	-5V	0V	-5V	0V	-5V	0V	-5V	0V
45°	0V	-5V	-5V	0V	0V	-5V	0V	-5V	-5V	0V
90°	-5V	0V	-5V	0V	-5V	0V	0V	-5V	-5V	0V
180°	0V	-5V	-5V	0V	-5V	0V	0V	-5V	0V	-5V
348.75°	-5V	0V	0V	-5V	0V	-5V	-5V	0V	0V	-5V

Assembly Drawing



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 input power: +20dBm
2. Control voltage: -8V-+0.5V
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C