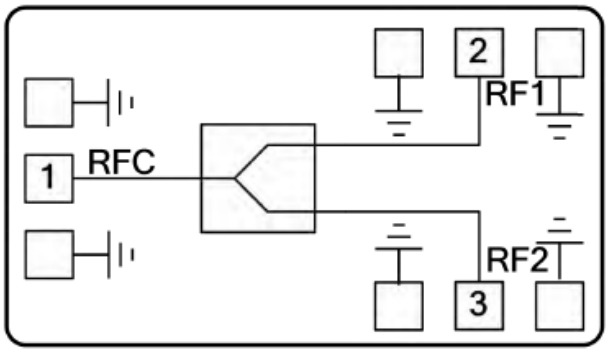
## Features

- Frequency: 1-20GHz
- Insertion Loss: 1.8dB Typical
- Isolation: 18dB Typical
- Input/Output: 50Ω
- Chip Size: 3.085 x 2.54 x 0.1mm

## Functional Block Diagram




## Typical Applications

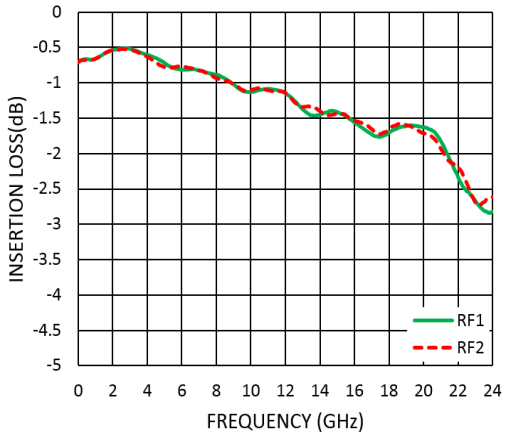
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

## Electrical Specifications

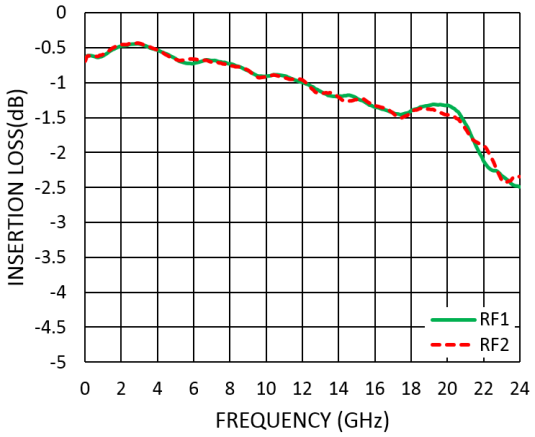
**TA = +25°C ,Pin=0dBm**

| Parameters | Min. | Typ. | Max. | Units |
|---|---|---|---|---|
| Frequency | 1 | | 20 | GHz |
| Nominal Splitter Loss | | 3 | | dB |
| Insertion Loss | | 1.8 | 2.0 | dB |
| Insertion Loss Flatness | | ±0.6 | | dB |
| Amplitude Imbalance | | ±0.05 | | dB |
| Phase Imbalance | | ±1 | | deg |
| Isolation | 13 | 17 | | dB |
| Input Return Loss | | -15 | | dB |
| Output Return Loss | | -20 | | dB |

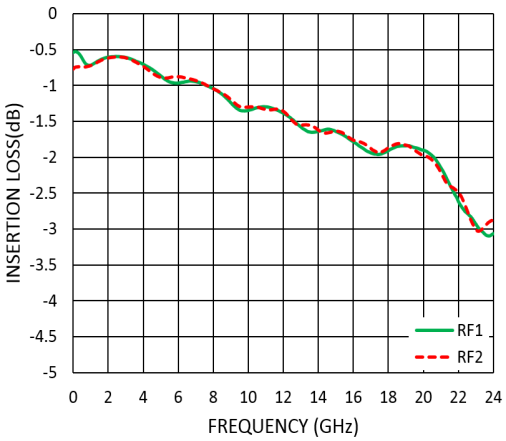
## Insertion Loss vs. Frequency
### $T_A$ = +25°C



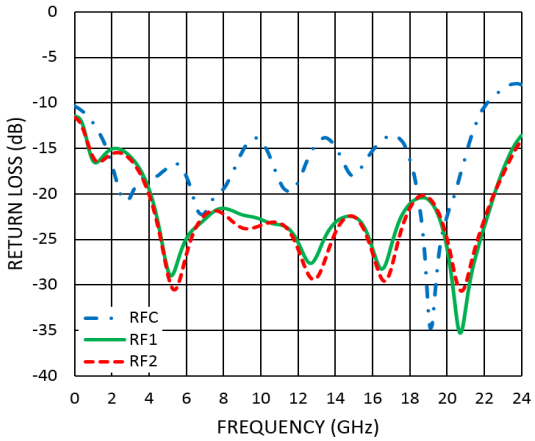

## Insertion Loss vs. Frequency
### $T_A$ = -40°C



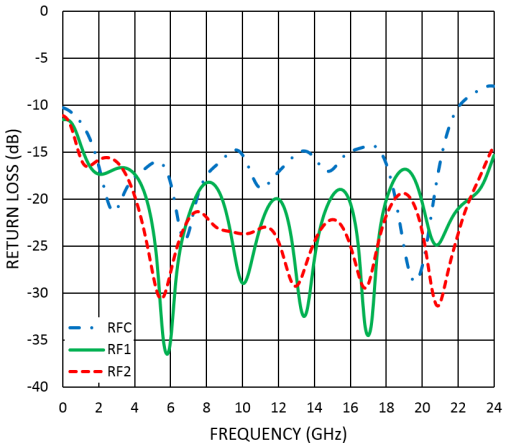

## Insertion Loss vs. Frequency
### $T_A$ = +85°C



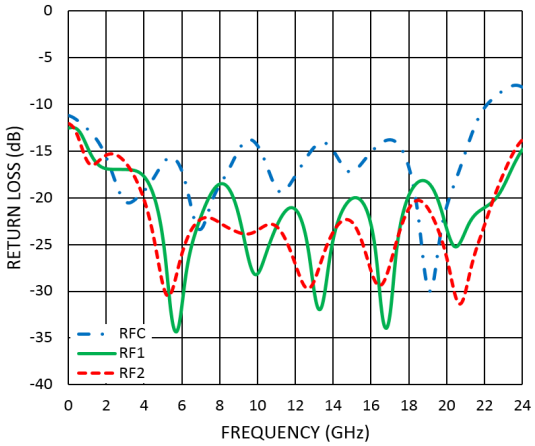

## Return Loss vs. Frequency
### $T_A$ = +25°C



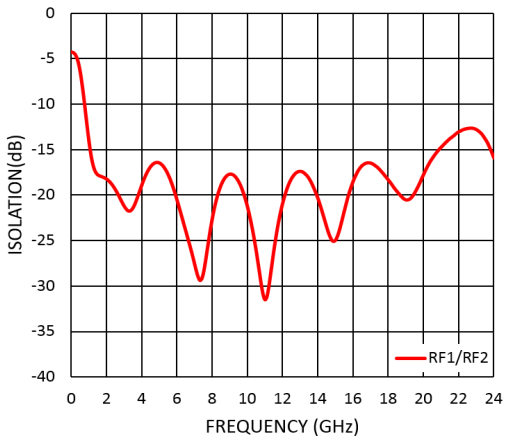

## Return Loss vs. Frequency
### $T_A$ = -40°C



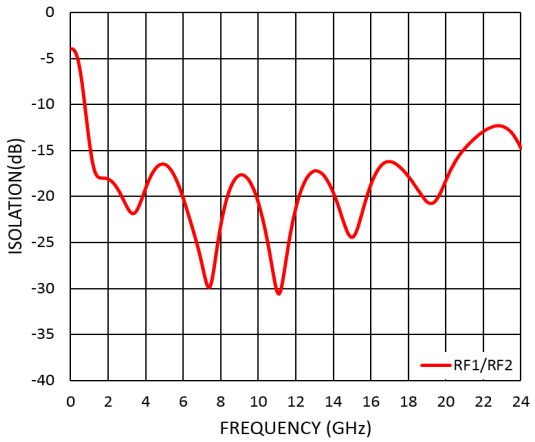

## Return Loss vs. Frequency
### $T_A$ = +85°C



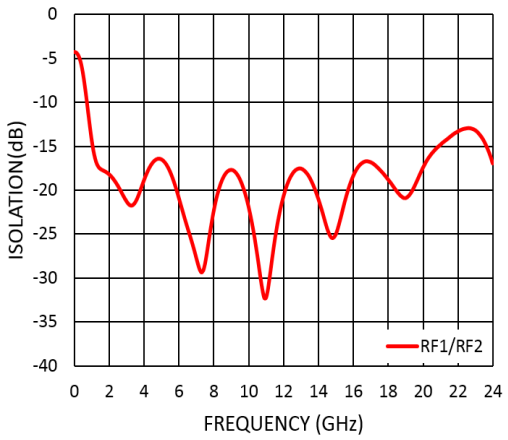
## Isolation vs. Frequency
### TA = +25°C



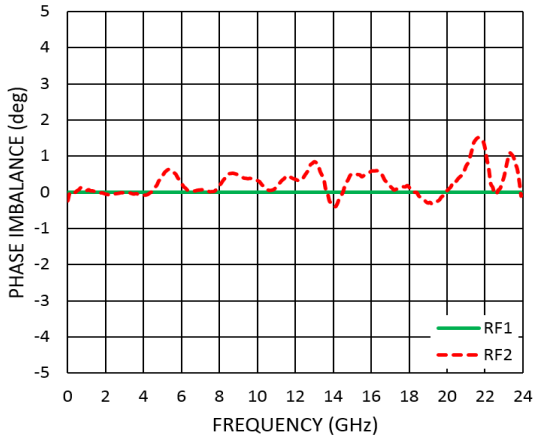

## Isolation vs. Frequency
### TA = -40°C



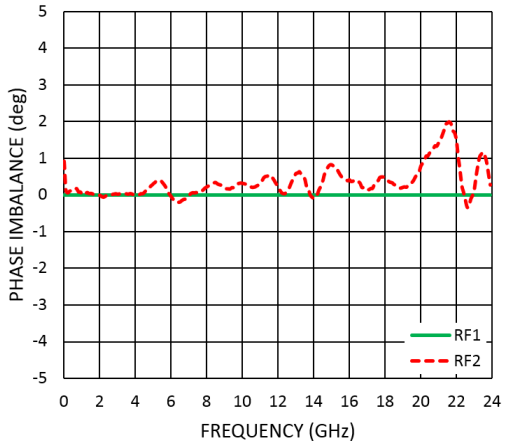

## Isolation vs. Frequency
### TA = +85°C



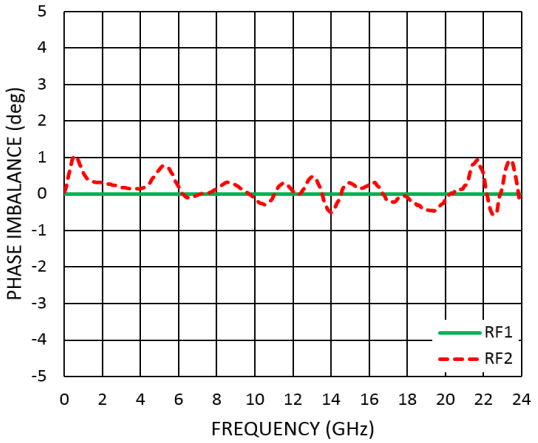

## Phase Imbalance vs. Frequency
### TA = +25°C



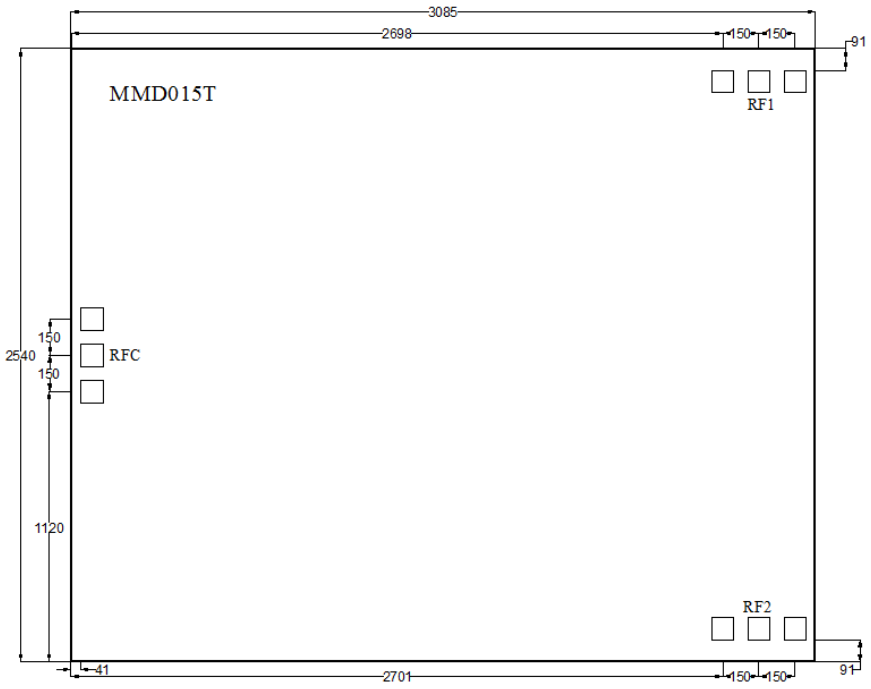

## Phase Imbalance vs. Frequency
### TA = -40°C




## Phase Imbalance vs. Frequency
### TA = +85°C



## Outline Drawing: All Dimensions in µm




## Absolute Maximum Ratings

| | |
|---|---|
| RF Input Power | +40dBm |
| Operating Temperature | -55°C to +85 °C |
| Storage Temperature | -65°C to +150 °C |

| No | Symbol | Description |
|---|---|---|
| 1 | RFC | RF Common Port |
| 2,3 | RF1&RF2 | RF Branch Ports |

**Notes:**

**1.Die thickness: 100µm**
**2.RF bond pad is 92*92µm$^2$**
**3.Bond pad metalization: Gold**
**4.Backside metalization: Gold**
**5.Backside of the die (GND)**