

## Dual Balance Mixer

**RF:6-26 GHz/LO:6-26 GHz/IF:DC-12 GHz****Model: TLBM-0626-S**

TLBM-0626-S is a dual balance mixer. The mixer covers the LO and RF frequency from 6 to 26 GHz with an extremely broad IF output from DC to 12 GHz. The mixer offers a conversion loss of 10 dB typical and LO input power of 15 dBm typical.

### Features:

- RF/LO coverage : 6-26GHz
- IF operation : DC-12GHz
- Conversion loss: 10dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

### Applications:

- Defense & federal communications
- Instrumentations

### Electrical Characteristics:

| Parameter         | Min | Typ | Max | Units |
|-------------------|-----|-----|-----|-------|
| RF Frequency      | 6   |     | 26  | GHz   |
| LO Frequency      | 6   |     | 26  | GHz   |
| LO-Input power    | 13  | 15  | 21  | dBm   |
| IF Frequency      | DC  |     | 12  | GHz   |
| IF Input Power    |     | -10 |     | dBm   |
| Conversion Loss   |     | 10  |     | dB    |
| Isolation "LO-RF" |     | 30  |     | dB    |
| Isolation "LO-IF" |     | 25  |     | dB    |
| Isolation "RF-IF" |     | 7   |     | dB    |

### Mechanical Specifications:

| Parameter   | Value         | Units |
|-------------|---------------|-------|
| Connector 1 | 2.92mm Female |       |
| Connector 3 | 2.92mm Female |       |
| Connector 2 | SMA Female    |       |
| Size        | 23.6*14.4*8   | mm    |

## Connector Functions:

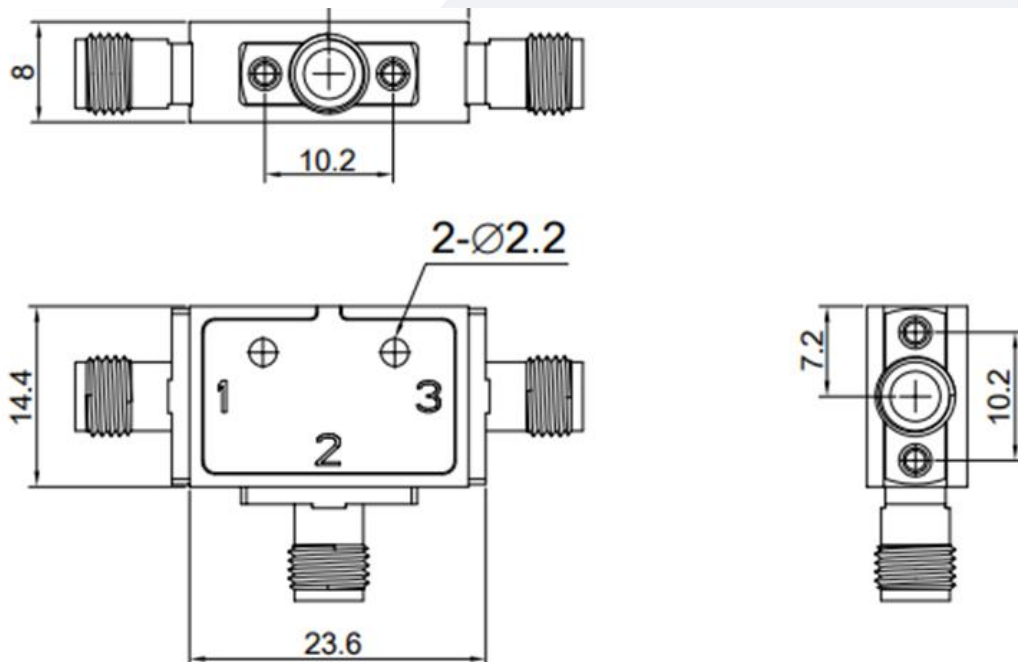
| Port   | Function |
|--------|----------|
| Port 1 | LO       |
| Port 2 | IF       |
| Port 3 | RF       |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| LO Input Power        | +21 dBm              |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



### Environmental Conditions:

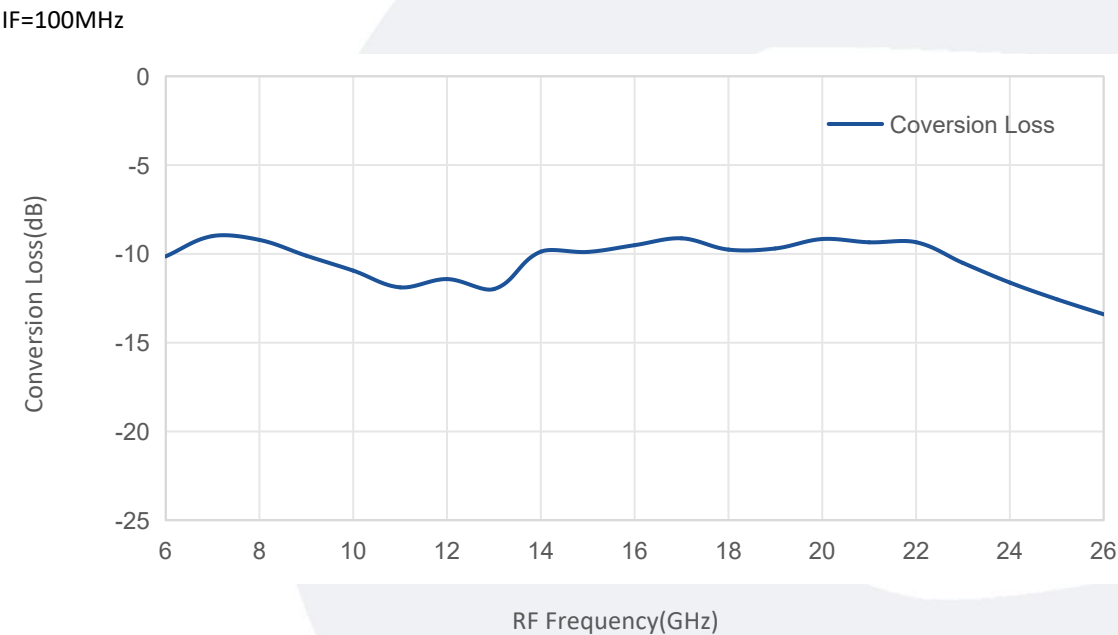
| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature           | -10                                                 |     | +65 | °C    |
| Non-operating Temperature       | -45                                                 |     | +85 | °C    |
| Relative humidity               |                                                     | 95  |     | %     |
| Altitude                        | 10,000                                              |     |     | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |     |       |
| Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |     |       |

### Ordering Information:

| Base Number | Description                                              | Revision |
|-------------|----------------------------------------------------------|----------|
| TLBM-0626-S | Dual Balanced Mixer<br>RF:6-26GHz,LO:6-26GHz,IF:DC-12GHz | Rev.1.1  |

### Typical Performance Data:

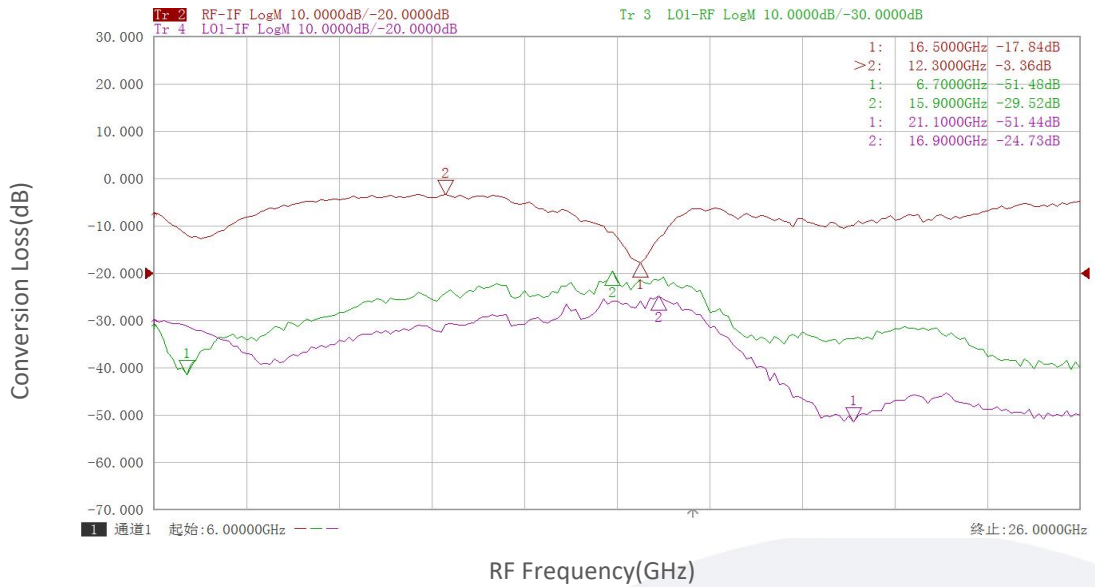
Conversion Loss vs RF Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### Isolation Loss vs RF Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.