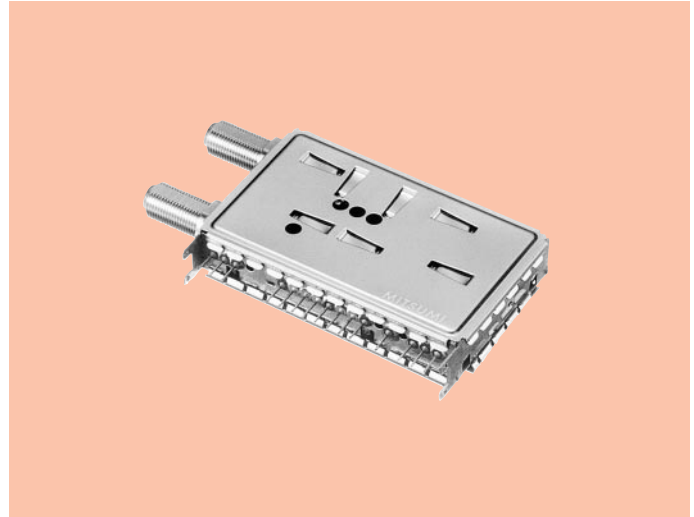


# 2nd RF Units for Digital Satellite Broadcasting Receiver TSU9 Series

DBS 2nd RF Units, CATV Converters

## OUTLINE

TSU9 series is a compact and lightweight second RF unit incorporating I/Q demodulator for receiving digital satellite broadcasting.



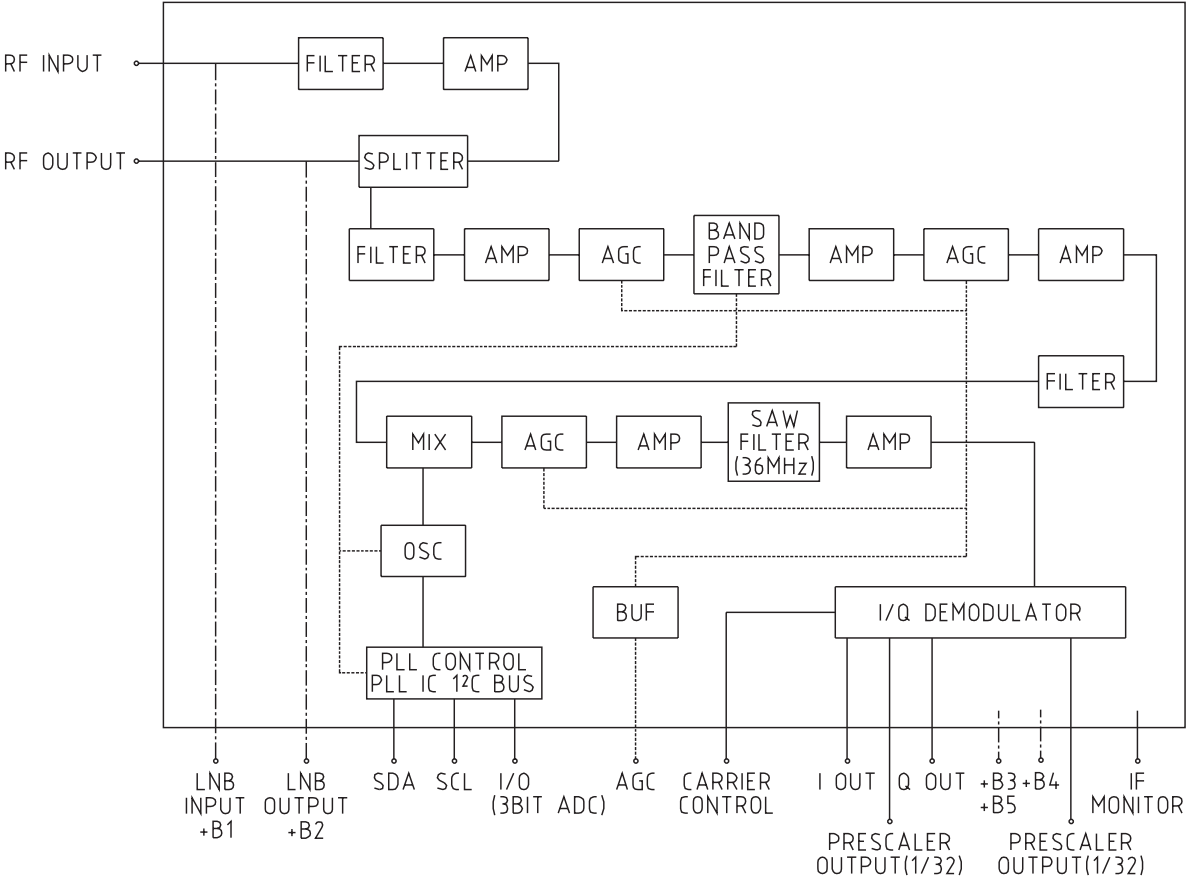
## FEATURE

1. Incorporates an I/Q demodulator.
2. Superb sensitivity and distortion characteristic.
3. Provided with a carrier control terminal that can control local oscillator frequency for I/Q demodulator.
4. Incorporates a distributor for connection to analog tuner.
5. Incorporates an IF-band switch.
6. Incorporates a PLL circuit that provides excellent phase noise characteristic.
7. A wide range of receivable input frequency.
8. Provided with a pre-scaler output terminal for I/Q demodulator.

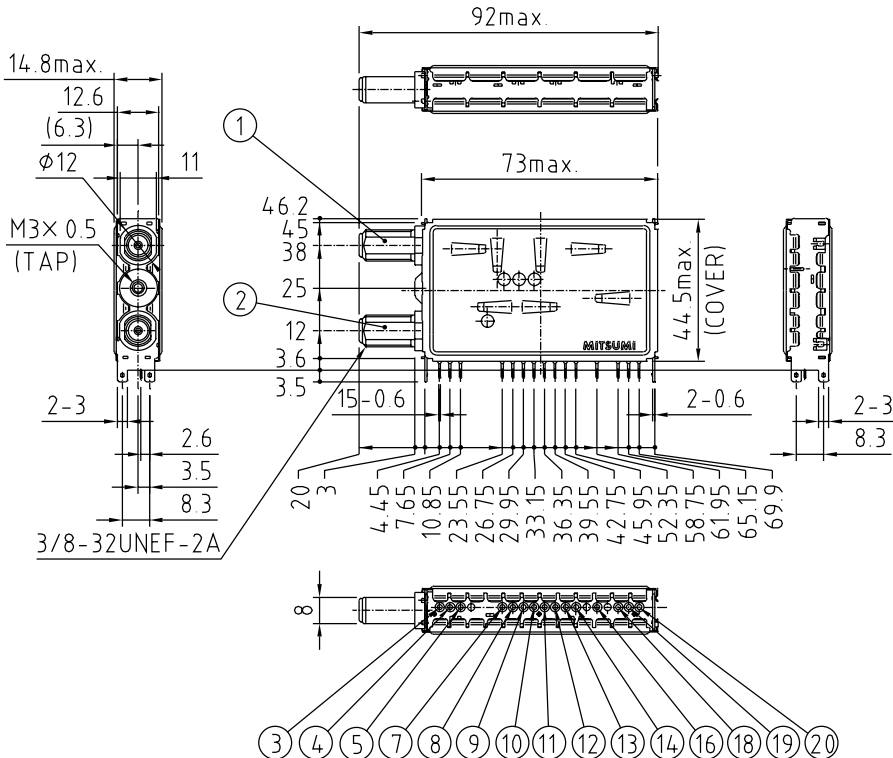
## SPECIFICATIONS

| Item                | Models | TSU9-E01DT   | Remarks                |
|---------------------|--------|--------------|------------------------|
|                     |        |              |                        |
| Input Frequency     |        | 950~2050MHz  |                        |
| Input Impedance     |        | 75Ω          |                        |
| Input Level         |        | -25~-70dBm   | F-female or IEC-female |
| IF Frequency        |        | 479.5MHz     |                        |
| IQ Output Level     |        | 0.5Vp-p typ. |                        |
| Phase Noise         |        | -78dBc/Hz    | at 10kHz off           |
| I/Q Phase Error     |        | ±3DEG max.   |                        |
| I/Q Amplitude Error |        | ±1.5dB max.  |                        |
| Intermodulation     |        | -40dBc typ.  | at 3 signals           |

**BLOCK DIAGRAM**



**DIMENSIONS**



| Terminals |                     |
|-----------|---------------------|
| 1.        | RF Input            |
| 2.        | RF Output           |
| 3.        | +B1 to LNB Input    |
| 4.        | +B2 to LNB Output   |
| 5.        | +B5 (+5V)           |
| 6.        | Carrier Control     |
| 7.        | I. Out              |
| 8.        | Q. Out              |
| 9.        | Prescaler Out       |
| 10.       | +B3 (+5V)           |
| 11.       | IF Monitor          |
| 12.       | AGC Control         |
| 13.       | —                   |
| 14.       | +B4 (+28V)          |
| 15.       | —                   |
| 16.       | Date                |
| 17.       | Clock               |
| 18.       | I/O Out (3 BIT ADC) |
| 19.       | Prescaler Out       |

Unit : mm  
General Tolerance : ±0.5mm