VSAT
Products Line-up
2019-2020
New Japan Radio Co., Ltd.
**High Efficiency & Ultra Compact Ku-band 6W BUC: NJT8376 series**

- **Good Linearity:**
  - Installed GaAs Based FET
  - Supporting Amplitude Modulation

- **High Efficiency Output Power**
  - P1dB: +37.8 dBm over Temperature
  - ACPR: -26 dBc @ Pout = +37 dBm
  - Power Consumption: 34 W

- **Compact Size & Light Weight**
  - Dimension: 98 (L) × 128 (W) × 42.5 (H) mm
  - Weight: 540 g

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**Lower Ku-band 2W & 4W BUC: NJT8315L & NJT8316L series**

- **RF Frequency:** 12.75 to 13.25 GHz

- **High Efficiency Output Power**
  - (4W Model: NJT8316L series)
    - P1dB: +36 dBm over Temperature
    - Power Consumption: 28 W
  - (2W Model: NJT8315L series)
    - P1dB: +33 dBm over Temperature
    - Power Consumption: 18 W

- **Small Size & Light Weight**
  - (4W Model: NJT8316L series)
    - Dimension: 98 (L) × 98 (W) × 42.5 (H) mm
    - Weight: 500 g
  - (2W Model: NJT8315L series)
    - Dimension: 91.55 (L) × 68 (W) × 42.5 (H) mm
    - Weight: 350 g

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**Insat C-band 2W & 3W BUC: NJT8102E & NJT8103E series**

- **Covering Insat & Full C-band Frequency**
  - Insat C-band: 6.725 to 7.025 GHz
  - Full C-band: 5.85 to 6.725 GHz
  - Standard C-band: 5.85 to 6.425 GHz

- **Smaller Size & Lighter Weight**
  - Dimension: 135.4 × 85 × 56 mm
  - Weight: 800 g

- **High Efficiency Output Power**
  - < 3W Model: NJT8103E series >
    - P1dB: +34.5 dBm min. over Temperature
    - ACPR: -26 dBc @ Pout <= +34.5 dBm
    - Power Consumption: 21 W
  - < 2W Model: NJT8102E series >
    - P1dB: +33.0 dBm min. over Temperature
    - ACPR: -26 dBc @ Pout <= +33.0 dBm
    - Power Consumption: 18 W
New Japan Radio Co., Ltd.
Microwave Division

GaN 40W ROBUST-BUC : NJT8371 series

Model No. RF Frequency Local Frequency IF Frequency Output Power @ Saturation IF Connector M&C Function AC Power Option Power Supply LED Indicator
NJT8371UNMK 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W) N-type FSK Communications NA DC Power Input Port: MS Connector Equipped
NJT8371UFMK 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W) N-type M&C Interface Enclosed Outdoor AC/DC PSU DC Power Input Port: MS Connector Supplied by Outdoor AC/DC PSU
NJT8371UNMR 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W) N-type RS-232C Interface NA DC Power Input Port: MS Connector
NJT8371UFMR 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W) N-type M&C Interface Enclosed Outdoor AC/DC PSU DC Power Input Port: MS Connector Supplied by Outdoor AC/DC PSU
NJT8371UNMRA 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W) N-type MS Connector NA DC Power Input Port: MS Connector
NJT8371UFMRA 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W) N-type MS Connector Enclosed Outdoor AC/DC PSU DC Power Input Port: MS Connector Supplied by Outdoor AC/DC PSU

Universal Ku-band (14.0 to 14.5 GHz) 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W)  @ Saturation

Non Suffix: Standard Ku-band (14.0 to 14.5 GHz) 13.75 to 14.50 GHz 12.80 GHz 950 to 1,700 MHz +46 dbm (40W)  @ Saturation

Product Series Model Number

Model Numbering System

NJT8371UNMK
NJT8371UFMK
NJT8371UNMR
NJT8371UFMR
NJT8371UNMRA
NJT8371UFMRA

*Note3: The detail is shown in section of "OUTDOOR 500W AC/DC PSU".

Note1: The detail is shown in section of "FSK COMMUNICATIONS M&C".

Note2: The detail is shown in section of "RS-232C INTERFACE M&C".

Note4: In case of 40W BUC NJT8371 series, the enclosed unit is Outdoor 500W AC/DC PSU.

In case of 25W BUC NJT8370 series, the enclosed unit is Outdoor 250W AC/DC PSU.

In case of 16W BUC NJT8319 series, the enclosed unit is Outdoor Outdoor 250W AC/DC PSU.

In case of 8W BUC NJT8318 series, the enclosed unit is Indoor 150W AC/DC PSU.

*Note5: The detail is shown in section of "OUTDOOR 500W AC/DC PSU".

-40 to +60 °C  -40 to +75 °C

(L) 230 × (W) 150 × (H) 100 mm

(L) 230 × (W) 150 × (H) 100 mm

(L) 9.07” × (W) 5.91” × (H) 3.94”

4.2 kg  [ 9.7 lbs ]

GaN 40W ROBUST-BUC : NJT8371 series

Datasheet

UNIVERSAL KU-BAND

Standard Ku 40W: NJT8371 series

Universal Ku 40W: NJT8371U series

New Japan Radio Co., Ltd.
Microwave Division

http://www.njr.com/micro
### GaN 25W MINI-BUC : NJT8370 series

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<th>IF Frequency</th>
<th>Output Power @ Saturation</th>
<th>IF Connector</th>
<th>M&amp;C Function</th>
<th>AC Power Option</th>
<th>Power Supply</th>
<th>LED Indicator</th>
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<td>NJT8370UNMK</td>
<td>13.75 to 14.50 GHz</td>
<td>(Universal Ku-band)</td>
<td>950 to 1,700 MHz</td>
<td>+44 dBm (25W)</td>
<td>N-type</td>
<td>FSK</td>
<td>Enclosed</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td>NJT8370UFMK</td>
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<td></td>
<td></td>
<td></td>
<td>N-type</td>
<td>FSK</td>
<td>Enclosed</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td>NJT8370UNMKA</td>
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<td>N-type</td>
<td>M&amp;C</td>
<td>NA</td>
<td>DC Power</td>
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<td>NJT8370UFMKA</td>
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<td>DC Power</td>
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<td>F-type</td>
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<td>NJT8370UNMK</td>
<td>14.00 to 14.50 GHz</td>
<td>(Standard Ku-band)</td>
<td>950 to 1,450 MHz</td>
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<td>Input Port: MS Connector</td>
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<td>N-type</td>
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<td>F-type</td>
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<td>DC Power</td>
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<td>M&amp;C</td>
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<td>NJT8370UFMR</td>
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<td>F-type</td>
<td>Interface</td>
<td>NA</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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</table>

- **Output Interface**: Waveguide, WR 75 with Groove
- **Input interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Output Power @ Saturation**: +44 dBm min. @ +25°C / +43 dBm min. over temperature
- **Conversion Gain**: 72 dB nom., 66 dB min.
- **Requirement External Reference Signal**: Input Port: IF Connector (combine reference with IF signal)
- **Reference Signal Frequency**: 10 MHz (sine-wave)
- **Input Power**: +5 to +5 dBm
- **Phase Noise (SSB)**: -125 dBc/Hz @100kHz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
- **Phase Noise (IF)**: -90 dBc/Hz @10kHz
- **Input V.S.W.R.**: 2.0 : 1 max. @ IF Frequency
- **Output V.S.W.R.**: 2.0 : 1 max. @ RF Frequency
- **Power Requirement**: +36 to +60 VDC at BUC Input Port
- **Power Consumption**: 180 W typ. @ Pout = +42 dBm 200 W typ. @ Pout = +42 dBm (AC Power Option: NJT8370NMKA / 70FMKA / 70NMR / 70FMR / NJT8370UNMKA / 70UFMKA / 70UNMR / 70UFMR)
- **Port for Voltage Input**: MS Connector : NJT8371NMK / 71FMK / 71NMR / 71FMR
- **Temperature Range (ambient)**: Operating: -40 to +75°C Performance: -40 to +60°C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**: (L) 180 x (W) 130 x (H) 80 mm
- **Weight**: 2.5 kg (5.5 lbs)

### Specifications

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<th>Specifications</th>
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<td>Reference Signal Frequency</td>
<td>10 MHz (sine-wave)</td>
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<tr>
<td>Input Power</td>
<td>+5 to +5 dBm</td>
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<td>Phase Noise (SSB)</td>
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<td>MS Connector : NJT8371NMK / 71FMK / 71NMR / 71FMR</td>
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<tr>
<td>Waterproof / Dustproof (IP Code)</td>
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<tr>
<td>Cooling</td>
<td>Forced-air-cooling by FAN</td>
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<td>Output Power @ Saturation</td>
<td>+42 dBm min. over temperature</td>
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<tr>
<td>Conversion Gain</td>
<td>68 dB nom., 62 dB min</td>
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<tr>
<td>Requirement External</td>
<td>Input Port: IF Connector (combine reference with IF signal)</td>
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<tr>
<td>Reference Signal</td>
<td>Frequency: 10 MHz (sine-wave) Input Power: -5 to +5 dBm</td>
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</tr>
<tr>
<td>Phase Noise (SSB)</td>
<td>-60 dBc/Hz @100Hz, -70 dBc/Hz @1kHz, -80 dBc/Hz @10kHz, -90 dBc/Hz @100kHz</td>
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<tr>
<td>Phase Noise (FSK)</td>
<td>-60 dBc/Hz @100Hz, -90 dBc/Hz @1kHz, -100 dBc/Hz @10kHz</td>
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<tr>
<td>Input V.S.W.R.</td>
<td>2.0:1 max. @ IF Frequency</td>
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<tr>
<td>Output V.S.W.R.</td>
<td>2.0:1 max. @ RF Frequency</td>
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<td>Power Requirement</td>
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<tr>
<td>Power Consumption</td>
<td>160 W typ., 180 W max.</td>
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<tr>
<td>Port for Voltage Input</td>
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<tr>
<td>Power Supply Option</td>
<td>DC Power Input: MS or IF Connector</td>
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<tr>
<td>LED Indicator</td>
<td>Equipped</td>
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<tr>
<td>Power Supply</td>
<td>Supplied by Outdoor AC/DC PSU</td>
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<tr>
<td>Interface Connector</td>
<td>N-type</td>
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<td>RS-232C Interface</td>
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<tr>
<td>M&amp;C Function</td>
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<tr>
<td>M&amp;C Function</td>
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<tr>
<td>Power Consumption</td>
<td>160 W typ., 180 W max.</td>
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<td>Port for Voltage Input</td>
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<tr>
<td>Power Supply Option</td>
<td>DC Power Input: MS or IF Connector</td>
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<tr>
<td>LED Indicator</td>
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<td>Power Supply</td>
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<td>Interface Connector</td>
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<tr>
<td>M&amp;C Function</td>
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</tbody>
</table>

*Note: The detail is shown in section of “FSK COMMUNICATIONS M&C”.
*Note1: The detail is shown in section of “OUTDOOR 250W AC/DC PSU”.
*Note2: The detail is shown in section of “RS-232C INTERFACE M&C”.
*Note3: The detail is shown in section of “OUTDOOR 250W AC/DC PSU”.

### Datasheet

**Standard Ku 16W: NJT8319 series**

**Universal Ku 16W: NJT8319U series**

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**New Japan Radio Co., Ltd.**

**Microwave Division**

**http://www.njr.com/micro**
# 8W MINI-BUC : NJT8318 series

**Specifications**

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<td>Local Frequency</td>
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<tr>
<td>NJT8318UN</td>
<td>13.75 to 14.50 GHz</td>
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<tr>
<td>NJT8318UF</td>
<td>14.00 to 14.50 GHz</td>
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<tr>
<td>NJT8318UN</td>
<td>13.75 to 14.50 GHz</td>
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<tr>
<td>NJT8318UF</td>
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<td>NJT8318UNM</td>
<td>13.75 to 14.50 GHz</td>
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<tr>
<td>NJT8318UM</td>
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<td>NJT8318UM</td>
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*Note8: The detail is shown in section of “INDOOR 150W AC/DC PSU”.

### Standard Ku 8W: NJT8318 series

#### Universal Ku 8W: NJT8318U series

**Datasheet**

- **Standard Ku 8W: NJT8318 series**
- **Universal Ku 8W: NJT8318U series**

**Product Details**

- **Model No.**
  - NJT8318U
  - NJT8318UF
  - NJT8318UNM
  - NJT8318UFM
  - NJT8318UNA
  - NJT8318UFA
  - NJT8318UNK
  - NJT8318UFK
  - NJT8318UNMK
  - NJT8318UFMK
  - NJT8318UNMR
  - NJT8318UFMR
  - NJT8318UNRA
  - NJT8318UFRA

- **Frequency Ranges**
  - **Universal Ku-band (8W):** 13.75 to 14.50 GHz
  - **Standard Ku-band (8W):** 13.75 to 14.50 GHz

- **Output Power**
  - +39 dBm min. at 8W

- **IF Connector**
  - N-type

- **M&C Function**
  - NA

- **AC Power Option**
  - Indoor AC/PSU

- **Power Supply**
  - DC Power

- **LED Indicator**
  - Equipped

### Product Specifications

- **Output Interface**
  - Waveguide, WR 75 with Groove

- **Input Interface**
  - Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)

- **Output Power @ Saturation**
  - +39 dBm min. over temperature

- **Conversion Gain**
  - 65 dB nom., 59 dB min.

- **Requirement External Reference Signal**
  - Input Port: IF Connector (combine reference with IF signal)

- **Phase Noise (SSB)**
  - -60 dBc/Hz @100Hz
  - -79 dBc/Hz @1kHz
  - -90 dBc/Hz @10kHz
  - -100 dBc/Hz @100kHz

- **Input V.S.W.R.**
  - 2.0:1 max. @ IF Frequency

- **Output V.S.W.R.**
  - 2.0:1 max. @ RF Frequency

- **Power Requirement**
  - +18 to +60 VDC at BUC Input Port
  - 90 to 264 VAC at Indoor AC/DC PSU: (AC Power Option)

- **Power Consumption**
  - 80 W typ., 90 W max.

- **Port for Voltage Input**
  - Same as IF Connector: NJT8318UN / 18FA / 18NMRA / 18FMRA / 18UNA / 18UFA / 18UNMRA / 18UFMRA

- **Temperature Range**
  - Operating: -40 to +75 °C
  - Storage: -40 to +75 °C

- **Waterproof / Dustproof (IP Code)**
  - IP 67

- **Weight**
  - 2.4 kg (5.3 lbs)
### 8W BUC: NJT5118 & NJT5218 series

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<th>Output Power @ P1dB</th>
<th>IF Connector</th>
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<td>12.80 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+39 dBm min. (6W)</td>
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<td>DC Power</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>NJT5218NA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Specifications

- **Output Interface**: Waveguide, WR 75 with Groove
- **Input Interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Output Power @ Saturation**: +39 dBm min. over temperature
- **Conversion Gain**: 59 dB min
- **Reference Signal**: Frequency: 10 MHz ( sine-wave )
  - Input Port: IF Connector ( combine reference with IF signal )
  - Phase Noise: -125 dBc/Hz @100Hz
  - -135 dBc/Hz @1kHz
  - -140 dBc/Hz @10kHz
  - -60 dBc/Hz @100Hz
  - -70 dBc/Hz @1kHz
  - -80 dBc/Hz @10kHz
  - -90 dBc/Hz @100kHz
  - -100 dBc/Hz @1MHz
- **Input V.S.W.R.**: 2.0 : 1 max. @ IF Frequency
- **Output V.S.W.R.**: 2.0 : 1 max. @ RF Frequency
- **Power Requirement**: +18 to +60 VDC at BUC Input Port
- **Power Consumption**: 79 W typ., 93 W max. : (Universal Ku-band) NJT5118 series
- **Port for Voltage Input**: Same as IF Connector : NJT5118N / 18F, NJT5218N / 18F
- **Temperature Range (ambient)**: Operating : -40 to +55 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension**: (L) 219.5 x (W) 175 x (H) 99 mm
- **Weight**: 3.2 kg (7.0 lbs)

### Datasheet

- **Standard Ku 6W: NJT5118 series
  Universal Ku 6W: NJT5218 series**

---

### 6W BUC: NJT8306 series / Low Distortion Model

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT8306N</td>
<td>13.75 to 14.50 GHz (Universal Ku-band)</td>
<td>12.80 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+37.8 dBm min. (6W)</td>
<td>N-type</td>
<td>F-type</td>
</tr>
<tr>
<td>NJT8306UF</td>
<td>14.00 to 14.50 GHz (Standard Ku-band)</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td></td>
<td>F-type</td>
<td>NA</td>
</tr>
</tbody>
</table>

### Specifications

- **Output Interface**: Waveguide, WR 75 with Groove
- **Input Interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Output Power @ 1 dB G.C.P.**: +37.8 dBm min. over temperature
- **Conversion Gain**: 62 dB nom., 56 dB min.
- **Reference Signal**: Frequency: 10 MHz ( sine-wave )
  - Input Port: IF Connector ( combine reference with IF signal )
  - Phase Noise: -125 dBc/Hz @100Hz
  - -135 dBc/Hz @1kHz
  - -140 dBc/Hz @10kHz
  - -60 dBc/Hz @100Hz
  - -70 dBc/Hz @1kHz
  - -80 dBc/Hz @10kHz
  - -90 dBc/Hz @100kHz
  - -100 dBc/Hz @1MHz
- **Input V.S.W.R.**: 2.0 : 1 max. @ IF Frequency
- **Output V.S.W.R.**: 1.3 : 1 max. for Recommendation of Output Load V.S.W.R.
- **Temperature Range (ambient)**: Operating : -40 to +55 °C
- **Power Requirement**: +12 to +30 VDC
- **Power Consumption**: 40 W typ., 50 W max.
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension**: (L) 174.9 x (W) 84 x (H) 59.2 mm
  - (L) 6.89" x (W) 3.31" x (H) 2.33"
- **Weight**: 1.2 kg (2.6 lbs)

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7
### 6W BUC: NJT8376 series / High Efficiency & Ultra Compact Model

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT8376UN</td>
<td>13.75 to 14.50 GHz (Universal Ku-band)</td>
<td>12.80 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+37.8 dBm min. (6W)</td>
<td>N-type</td>
<td>NA</td>
</tr>
<tr>
<td>NJT8376UF</td>
<td>14.00 to 14.50 GHz (Universal Ku-band)</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td></td>
<td>N-type</td>
<td>F-type</td>
</tr>
<tr>
<td>NJT8376N</td>
<td>13.05 GHz</td>
<td></td>
<td></td>
<td></td>
<td>F-type</td>
<td></td>
</tr>
<tr>
<td>NJT8376F</td>
<td>13.05 GHz</td>
<td></td>
<td></td>
<td></td>
<td>N-type</td>
<td>F-type</td>
</tr>
</tbody>
</table>

#### Item Specifications

- **Output Interface**: Waveguide, WR 75 with Groove
- **Input Interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Output Power @ 1 dB G.C.P.**: +37.8 dBm min. over temperature
- **Conversion Gain**: 62 dB nom., 56 dB min.
- **Requirement External Reference Signal**: Input Port: IF Connector (combine reference with IF signal)
- **Frequency**: 10 MHz (sine-wave)
- **Input Power**: -5 to +5 dBm
- **Phase Noise (SSB)**: -125 dBc/Hz @100Hz, -135 dBc/Hz @1kHz, -140 dBc/Hz @10kHz
- **Phase Noise (IF)**: -60 dBc/Hz @100Hz, -70 dBc/Hz @1kHz, -80 dBc/Hz @10kHz, -90 dBc/Hz @1kHz, -100 dBc/Hz @1MHz
- **Input V.S.W.R.**: 2.0 : 1 max. @ IF Frequency
- **Output V.S.W.R.**: 2.0 : 1 max. @ RF Frequency
- **Power Requirement**: +12 to +30 VDC
- **Power Consumption**: 34 W typ., 38 W max.
- **Temperature Range (ambient)**: Operating: -40 to +60 °C, Storage: -40 to +75 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**: (L) 98 x (W) 128 x (H) 42.5 mm
- **Weight**: 540 g [1.2 lbs]

### 4W BUC: NJT8304 & NJT8316L series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT8304LN</td>
<td>12.75 to 13.25 GHz (Lower Ku-band)</td>
<td>11.80 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+36 dBm min. (4W)</td>
<td>N-type</td>
<td>NA</td>
</tr>
<tr>
<td>NJT8304LF</td>
<td>13.75 to 14.50 GHz (Universal Ku-band)</td>
<td>12.80 GHz</td>
<td>950 to 1,700 MHz</td>
<td></td>
<td>N-type</td>
<td>F-type</td>
</tr>
<tr>
<td>NJT8304UN</td>
<td>13.00 to 14.50 GHz (Universal Ku-band)</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td></td>
<td>N-type</td>
<td>F-type</td>
</tr>
<tr>
<td>NJT8304N</td>
<td>14.00 to 14.50 GHz (Standard Ku-band)</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td></td>
<td>N-type</td>
<td>F-type</td>
</tr>
</tbody>
</table>

#### Item Specifications

- **Output Interface**: Waveguide, WR 75 with Groove
- **Input Interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Output Power @ 1 dB G.C.P.**: +36 dBm min. over temperature
- **Conversion Gain**: 62 dB nom., 56 dB min.
- **Requirement External Reference Signal**: Input Port: IF Connector (combine reference with IF signal)
- **Frequency**: 10 MHz (sine-wave)
- **Input Power**: -5 to +5 dBm
- **Phase Noise (SSB)**: -125 dBc/Hz @100Hz, -135 dBc/Hz @1kHz, -140 dBc/Hz @10kHz
- **Phase Noise (IF)**: -60 dBc/Hz @100Hz, -70 dBc/Hz @1kHz, -80 dBc/Hz @10kHz, -90 dBc/Hz @1kHz, -100 dBc/Hz @1MHz
- **Input V.S.W.R.**: 2.0 : 1 max. @ IF Frequency
- **Output V.S.W.R.**: 2.0 : 1 max. @ RF Frequency
- **Power Requirement**: +12 to +30 VDC
- **Power Consumption**: 28 W typ., 32 W max.
- **Temperature Range (ambient)**: Operating: -40 to +60 °C, Storage: -40 to +75 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**: (L) 98 x (W) 128 x (H) 42.5 mm
- **Weight**: 500 g [1.1 lbs]

**Datasheet**

- NJT8316L series
- NJT8304 series

**New**

- Standard Ku 6W: NJT8376 series
- Universal Ku 6W: NJT8376U series

**New**

- Lower Ku 4W: NJT8316L series
- Standard Ku 4W: NJT8304 series
- Universal Ku 4W: NJT8304U series
# 3W / 2W / 1.5W BUC : NJT8301, NJT8302 & NJT8315L series

## UNIVERSAL KU-BAND

### Standard Ku 3W: NJT8302 series

**Universal Ku-band:** NJT8302 series

**Lower Ku-band:** NJT8315L series

**Standard Ku 1.5W:** NJT8301 series

**Universal Ku-band:** NJT8301U series

### 3W BUC: NJT8302 series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT8302UN</td>
<td>13.75 to 14.50 GHz</td>
<td>12.80 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+34 dBm min. (3W)</td>
<td>N-type</td>
<td>NA</td>
</tr>
<tr>
<td>NJT8302UF</td>
<td>14.00 to 14.50 GHz</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+33 dBm min. (2W)</td>
<td>F-type</td>
<td>NA</td>
</tr>
</tbody>
</table>

### 2W BUC: NJT8315L series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT8315LN</td>
<td>12.75 to 13.25 GHz</td>
<td>11.80 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+33 dBm min. (2W)</td>
<td>F-type</td>
<td>NA</td>
</tr>
<tr>
<td>NJT8315LF</td>
<td>14.00 to 14.50 GHz</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+31 dBm min. (1.5W)</td>
<td>F-type</td>
<td>NA</td>
</tr>
</tbody>
</table>

### 1.5W BUC: NJT8301 series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT8301UN</td>
<td>13.75 to 14.50 GHz</td>
<td>12.80 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+31 dBm min. (1.5W)</td>
<td>N-type</td>
<td>NA</td>
</tr>
<tr>
<td>NJT8301UF</td>
<td>14.00 to 14.50 GHz</td>
<td>13.05 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+30 dBm min. (1W)</td>
<td>F-type</td>
<td>NA</td>
</tr>
</tbody>
</table>

## Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Interface</td>
<td>Waveguide, WR 75 with Groove</td>
</tr>
<tr>
<td>Input Interface</td>
<td>Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)</td>
</tr>
<tr>
<td>Output Power @ 1 dB G.C.P.</td>
<td>+34.0 dBm min. over temperature: (3W) NJT8302 series</td>
</tr>
<tr>
<td></td>
<td>+33.0 dBm min. over temperature: (2W) NJT8315L series</td>
</tr>
<tr>
<td>Conversion Gain</td>
<td>58 dB typ., 51 dB min.: (3W) NJT8302 series</td>
</tr>
<tr>
<td></td>
<td>59 dB nom., 53 dB min.: (2W) NJT8315L series</td>
</tr>
<tr>
<td></td>
<td>55 dB typ., 48 dB min.: (1.5W) NJT8301 series</td>
</tr>
<tr>
<td>Requirement External</td>
<td>Input Port: IF Connector (combine reference with IF signal)</td>
</tr>
<tr>
<td>Reference Signal</td>
<td>Frequency: 10 MHz (sine-wave)</td>
</tr>
<tr>
<td></td>
<td>Input Power: -5 to +5 dBm</td>
</tr>
<tr>
<td></td>
<td>Phase Noise: -125 dBc/Hz @100Hz , -135 dBc/Hz @1kHz , -140 dBc/Hz @10kHz</td>
</tr>
<tr>
<td></td>
<td>-60 dBc/Hz @100kHz , -70 dBc/Hz @1kHz , -80 dBc/Hz @10kHz</td>
</tr>
<tr>
<td></td>
<td>-90 dBc/Hz @100kHz , -100 dBc/Hz @1kHz</td>
</tr>
<tr>
<td>Input V.S.W.R.</td>
<td>2.0 : 1 max. @ IF Frequency</td>
</tr>
<tr>
<td>Output V.S.W.R.</td>
<td>2.0 : 1 max. @ RF Frequency</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>+12 to +30 VDC</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>18 W typ., 23 W max.: (3W) NJT8302 series</td>
</tr>
<tr>
<td></td>
<td>18 W typ., 22 W max.: (2W) NJT8315L series</td>
</tr>
<tr>
<td></td>
<td>12 W typ., 14 W max.: (1.5W) NJT8301 series</td>
</tr>
<tr>
<td>Temperature Range (ambient)</td>
<td>Operating: -40 to +60 °C</td>
</tr>
<tr>
<td></td>
<td>Storage: -40 to +75 °C: NJT8315L series</td>
</tr>
<tr>
<td></td>
<td>Operating: -40 to +55 °C: NJT8302 / NJT8301 series</td>
</tr>
<tr>
<td>Waterproof / Dustproof (IP Code)</td>
<td>IP 67</td>
</tr>
<tr>
<td>Dimension</td>
<td>(L) 91.55 x (W) 68 x (H) 42.5 mm</td>
</tr>
<tr>
<td></td>
<td>(L) 3.6&quot; x (W) 2.68&quot; x (H) 1.67&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>350 g [0.77 lbs]</td>
</tr>
</tbody>
</table>

## Model Numbering System

**NJ T 8 3 7 6 U N**

- **IF Interface Connector** - N: N-type (50 ohms), Female Connector
- **RF Frequency** - Non Suffix: Standard Ku-band (14.0 to 14.5 GHz)
  - U: Universal Ku-band (13.75 to 14.5 GHz)
  - L: Lower Ku-band (12.75 to 13.25 GHz)
- **Output Power** - 76: +37.8 dBm (6W) @ 1dB G.C.P., High Efficiency & Ultra Compact Model
  - 06: +37.8 dBm (6W) @ 1dB G.C.P., Low Distortion Model
  - 04: +36.0 dBm (4W) @ 1dB G.C.P.
  - 16: +36.0 dBm (4W) @ 1dB G.C.P., ONLY for Lower Ku-band
  - 02: +34.0 dBm (3W) @ 1dB G.C.P.
  - 15: +33.0 dBm (2W) @ 1dB G.C.P., ONLY for Lower Ku-band
  - 01: +31.0 dBm (1.5W) @ 1dB G.C.P.
Ku-band Bare-Die-Module BUC

Feature
Miniaturization and stable characteristics by the following advantage technologies

Advantage
- Wide band and good repeatability by RF-PA Bare-Die assembly technology
- Excellent thermal management by Copper base PCB and Laser Cavity technology
- Excellent spurious suppression by Sub-harmonic mixer technology and Alumina filter technology
- Stacked structure

10W ROBUST-BUC : NJT8371
- High Efficiency Output Power
  Saturation Output Power: +46.0 dBm
  ACPR: -30 dBc @ Pout = +44 dBm
  Power Consumption: 260 W
- Compact Size & Light Weight
  Dimension: 230 x 150 x 100 mm
  Weight: 4.2 kg

25W MINI-BUC : NJT8370
- High Temperature Operating
  Operation Temp. Range: -40 to +75 °C
- High Efficiency Output Power
  Saturation Output Power: +44.0 dBm
  ACPR: -30 dBc @ Pout = +42 dBm
  Power Consumption: 200 W
- Miniature Size & Light Weight
  Weight: 2.5 kg

16W MINI-BUC : NJT8319
8W MINI-BUC : NJT8318
- High Temperature Operating
  Operation Temp. Range: -40 to +75 °C
- High Efficiency & Low Distortion
  <16W Model>
  P1dB: +42.0 dBm over Temp.
  ACPR: -28 dBc @ Pout = +41 dBm
  Power Consumption: 160 W
  <8W Model>
  P1dB: +39.0 dBm over Temp.
  ACPR: -28 dBc @ Pout = +38 dBm
  Power Consumption: 80 W
- Miniature Size & Light Weight
  Weight: 2.4 kg

6W SLIM-SIZE BUC : NJT8306
- High Temperature Operating
  Operation Temp. Range: -40 to +65 °C
- High Efficiency & Low Distortion
  P1dB: +37.8 dBm over Temp.
  ACPR: -26 dBc @ Pout = +37.8 dBm
  Power Consumption: 45 W
- Compact Size & Light Weight
  Weight: 1.2 kg

4W COMPACT-BUC : NJT8304
- Super High Efficiency & Low Distortion
  P1dB: +36 dBm over Temp.
  ACPR: -28 dBc @ Pout = +35.5 dBm
  Power Consumption: 28 W
- Compact Size & Light Weight
  Weight: 500 g

3W BUC : NJT8302 / 1.5W BUC : NJT8301
- Super High Efficiency & Low Distortion
  <3W Model>
  P1dB: +34 dBm over Temp.
  Power Consumption: 18 W
  <1.5W Model>
  P1dB: +31 dBm over Temp.
  Power Consumption: 12 W
- Smallest Size & Lightest Weight
  Weight: 350 g

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In case of the products of Switchable 2LO PLL LNB, the following three methods to switch local frequency can be chosen by the customer

- **Mechanical Switch**
- **22kHz Tone On/Off**
- **Input Voltage High/Low**

### Specification of Local Switch

<table>
<thead>
<tr>
<th>RF Frequency</th>
<th>Low Band (10.7 to 11.7 GHz)</th>
<th>High Band (11.7 to 12.75 GHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Switch</td>
<td><img src="image" alt="Mechanical Switch" /></td>
<td><img src="image" alt="Mechanical Switch" /></td>
</tr>
<tr>
<td>22kHz Tone On/Off</td>
<td><img src="image" alt="22kHz Tone On/Off" /></td>
<td><img src="image" alt="22kHz Tone On/Off" /></td>
</tr>
<tr>
<td>Input Voltage High/Low</td>
<td>Voltage: +10 to +14 VDC</td>
<td>Voltage: +15.5 to +24 VDC</td>
</tr>
</tbody>
</table>

**Applicable Models:** NJR2841, NJR2842 and NJR2843 series
Ku-band LNB

PLL LNB [ Internal & External Reference Type ] : NJR2835 & NJR2935E series

Internal Reference Type: NJR2835 series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Local Stability [-40 to +60 °C]</th>
<th>IF Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJR2837H</td>
<td>10.95 to 11.70 GHz</td>
<td>10.00 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+/- 10 ppm (+/- 100 kHz typ.)</td>
<td>F-type</td>
</tr>
<tr>
<td>NJR2837HN</td>
<td>10.95 to 11.70 GHz</td>
<td>10.00 GHz</td>
<td>950 to 1,700 MHz</td>
<td>+/- 3 ppm (+/- 30 kHz typ.)</td>
<td>F-type</td>
</tr>
<tr>
<td>NJR2837S</td>
<td>11.20 to 11.70 GHz</td>
<td>10.25 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 1 ppm (+/- 10 kHz typ.)</td>
<td>N-type</td>
</tr>
<tr>
<td>NJR2838H</td>
<td>11.20 to 11.70 GHz</td>
<td>10.25 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 1 ppm (+/- 10 kHz typ.)</td>
<td>N-type</td>
</tr>
<tr>
<td>NJR2838HN</td>
<td>11.20 to 11.70 GHz</td>
<td>10.25 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 1 ppm (+/- 10 kHz typ.)</td>
<td>N-type</td>
</tr>
<tr>
<td>NJR2839S</td>
<td>11.20 to 11.70 GHz</td>
<td>10.25 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 1 ppm (+/- 10 kHz typ.)</td>
<td>N-type</td>
</tr>
</tbody>
</table>

External Reference Type: NJR2935E series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Local Stability [-40 to +60 °C]</th>
<th>IF Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJR2835H</td>
<td>11.70 to 12.20 GHz</td>
<td>10.75 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 10 ppm (+/- 100 kHz typ.)</td>
<td>F-type</td>
</tr>
<tr>
<td>NJR2835HN</td>
<td>11.70 to 12.20 GHz</td>
<td>10.75 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 3 ppm (+/- 30 kHz typ.)</td>
<td>F-type</td>
</tr>
<tr>
<td>NJR2835S</td>
<td>11.70 to 12.20 GHz</td>
<td>10.75 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 1 ppm (+/- 10 kHz typ.)</td>
<td>N-type</td>
</tr>
<tr>
<td>NJR2836H</td>
<td>12.25 to 12.75 GHz</td>
<td>11.30 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 10 ppm (+/- 100 kHz typ.)</td>
<td>F-type</td>
</tr>
<tr>
<td>NJR2836HN</td>
<td>12.25 to 12.75 GHz</td>
<td>11.30 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 3 ppm (+/- 30 kHz typ.)</td>
<td>F-type</td>
</tr>
<tr>
<td>NJR2836S</td>
<td>12.25 to 12.75 GHz</td>
<td>11.30 GHz</td>
<td>950 to 1,450 MHz</td>
<td>+/- 1 ppm (+/- 10 kHz typ.)</td>
<td>N-type</td>
</tr>
</tbody>
</table>

Specifications

- **Input Interface**: Waveguide, WR 75 with Groove
- **Output Interface**: Coax. Connector, N-type female ( 50 ohm ) / F-type female ( 75 ohm )
- **Noise figure ( at +25 °C )**: 0.8 dB
- **Conversion Gain ( at +25 °C )**: 60 dB typ.
- **Requirement External Reference Signal ( Only NJR2935E series are specified )**: Input Port: IF Connector ( combine reference with IF signal ) Frequency: 10 MHz ( sine-wave ) Input Power: -10 to 0 dBm Phase Noise: -135 dBc/Hz @100Hz -143 dBc/Hz @1kHz -145 dBc/Hz @10kHz Phase Noise (SSB) ( Internal Reference Type ) NJR2835 series: -70 dBc/Hz @100Hz -80 dBc/Hz @1kHz ( External Reference Type ) NJR2935E series: -75 dBc/Hz @100Hz -85 dBc/Hz @1kHz
- **Depends on Phase Noise of External Reference**
- **Power Requirement**: +12 to +24 VDC
- **Operating Current**: 250 mA max.
- **Temperature Range (ambient)**: Operating: -40 to +60 °C Storage: -40 to +80 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**: (L)100.5 x (W) 40 x (H) 40 mm [ (L) 3.96” x (W) 1.57” x (H) 1.57” ]
- **Weight**: 260 g [ 0.57 lbs ]
### 10W BUC: NJT5762, NJT5763 & NJT5764 series

#### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Interface</td>
<td>Waveguide, CPR 137 with Groove</td>
</tr>
<tr>
<td>Input Interface</td>
<td>Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)</td>
</tr>
<tr>
<td>Output Power @ 1 dB G.C.P.</td>
<td>+40 dBm min. over temperature</td>
</tr>
<tr>
<td>Conversion Gain</td>
<td>64 dB nom., 58 dB min.</td>
</tr>
<tr>
<td>Requirement External</td>
<td>Input Port: IF Connector (combine reference with IF signal)</td>
</tr>
<tr>
<td>Reference Signal</td>
<td>Frequency: 10 MHz (sine-wave) Input Power: -5 to +5 dBm Phase Noise: -125 dBc/Hz @ 100Hz -135 dBc/Hz @ 1kHz -140 dBc/Hz @ 10kHz Phase Noise (SSB)</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>+18 to +60 VDC at BUC Input Port (Floating DC Power Option) +48 / +48 VDC (38 to 55 VDC) (AC Power Option) +90 to 264 VAC at Indoor AC/DC PSU</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>69 W typ., 75 W max. (Standard C-band) NJT5762 series 73 W typ., 85 W max. (Full C-band) NJT5763 series 73 W typ., 80 W max. (Insat C-band) NJT5764 series</td>
</tr>
<tr>
<td>Port for Voltage Input</td>
<td>Same as IF Connector: NJT5762N / NJT5762M / NJT5762F / NJT5762KM / NJT5762FM / NJT5762KN / NJT5762NM / NJT5762KA / NJT5762KF / NJT5762KNM</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>Operating: -40 to +55 °C Storage: -40 to +75 °C</td>
</tr>
<tr>
<td>Waterproof / Dustproof (IP Code)</td>
<td>IP 67</td>
</tr>
<tr>
<td>Dimension (without Interface Connector)</td>
<td>(L) 219.5 x (W) 175 x (H) 99 mm (L) 86.4 x (W) 68.9 x (H) 3.90”</td>
</tr>
<tr>
<td>Weight</td>
<td>3.2 kg (7.0 lbs)</td>
</tr>
</tbody>
</table>

### Datasheet

**Model No.**

- **NJT5763N**
- **NJT5763F**
- **NJT5763NM**
- **NJT5763MND**
- **NJT5763FMD**
- **NJT5763NA**
- **NJT5763FNA**

**New**

- **NJT5762N**
- **NJT5762F**
- **NJT5762NM**
- **NJT5762MND**
- **NJT5762FMD**
- **NJT5762NA**
- **NJT5762FNA**

**NEW**

- **NJT5764N**
- **NJT5764F**
- **NJT5764NM**
- **NJT5764MND**
- **NJT5764FMD**
- **NJT5764NA**
- **NJT5764FNA**

**NEW**

- **NJT5762NA**
- **NJT5762FNA**
- **NJT5762KN**
- **NJT5762KNM**
- **NJT5762KF**
- **NJT5762KFNM**

**New**

- **NJT5764NA**
- **NJT5764FNA**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power @ P1dB</th>
<th>IF Connector</th>
<th>AC Power Option</th>
<th>Power Supply</th>
<th>M&amp;C Function</th>
<th>LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NJT5763N</strong></td>
<td>5.850 to 6.725 GHz (Full C-band)</td>
<td>4.90 GHz</td>
<td>950 to 1,825 MHz</td>
<td>+40 dBm min. (10W)</td>
<td>N-type</td>
<td>NA</td>
<td>DC Power</td>
<td>NA</td>
<td>Equipped</td>
</tr>
<tr>
<td><strong>NJT5763F</strong></td>
<td>5.850 to 6.425 GHz (Standard C-band)</td>
<td>4.90 GHz</td>
<td>950 to 1,525 MHz</td>
<td></td>
<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Input Port: IF Connector</td>
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<tr>
<td><strong>NJT5763NM</strong></td>
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<td></td>
<td></td>
<td></td>
<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<tr>
<td><strong>NJT5763MND</strong></td>
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<td></td>
<td></td>
<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Floating DC Power: -48/+48V</td>
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<tr>
<td><strong>NJT5763FMD</strong></td>
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<td></td>
<td></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<tr>
<td><strong>NJT5763NA</strong></td>
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<td>N-type</td>
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<td>DC Power</td>
<td>Input Port: IF Connector</td>
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<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
<td></td>
</tr>
<tr>
<td><strong>NJT5762N</strong></td>
<td>5.850 to 6.725 GHz (Insat C-band)</td>
<td>4.90 GHz</td>
<td>950 to 1,825 MHz</td>
<td>+40 dBm min. (10W)</td>
<td>N-type</td>
<td>NA</td>
<td>DC Power</td>
<td>Indoor AC/DC PSU</td>
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</tr>
<tr>
<td><strong>NJT5762F</strong></td>
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<td></td>
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<td>N-type</td>
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<td>DC Power</td>
<td>Input Port: IF Connector</td>
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<td><strong>NJT5762NM</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td><strong>NJT5762MND</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td><strong>NJT5762FMD</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td>N-type</td>
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<td>DC Power</td>
<td>Input Port: IF Connector</td>
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<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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</tr>
<tr>
<td><strong>NJT5764N</strong></td>
<td>6.725 to 7.035 GHz (Insat C-band)</td>
<td>5.76 GHz</td>
<td>965 to 1,265 MHz</td>
<td></td>
<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Indoor AC/DC PSU</td>
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<td><strong>NJT5764F</strong></td>
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<td>N-type</td>
<td></td>
<td>DC Power</td>
<td>Input Port: IF Connector</td>
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<td><strong>NJT5764NM</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<tr>
<td><strong>NJT5764MND</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td><strong>NJT5764FMD</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<td><strong>NJT5764NA</strong></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
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<tr>
<td><strong>NJT5764FNA</strong></td>
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<td></td>
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<td>N-type</td>
<td>Indoor AC/DC PSU</td>
<td>DC Power</td>
<td>Input Port: MS Connector</td>
<td></td>
</tr>
</tbody>
</table>

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*Note1: The detail is shown in section of “FSK COMMUNICATIONS M&C”.

*Note8: The detail is shown in section of “INDOOR 150W AC/DC PSU”.

---

Full C-Band

Standard C 10W: NJT5762 series

Full C 10W: NJT5763 series

Insat C 10W: NJT5764 series

Datasheet
### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Interface</td>
<td>Waveguide, CPR 137 with Groove</td>
</tr>
<tr>
<td>Input Interface</td>
<td>Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)</td>
</tr>
<tr>
<td>Output Power @ 1 dB G.C.P.</td>
<td>+37.0 dBm min. over temperature : (5W) NJT5669 / NJT5670 / NJT5675 / NJT5677 series +34.5 dBm min. over temperature : (3W) NJT8103 series +33.0 dBm min. over temperature : (2W) NJT8102 series</td>
</tr>
<tr>
<td>Conversion Gain</td>
<td>61 dB nom., 53 dB min. : (3W) NJT8103 series 58 dB nom., 52 dB min. : (2W) NJT8102 series</td>
</tr>
<tr>
<td>Requirement External</td>
<td>Input Port: IF Connector (combine reference with IF signal)</td>
</tr>
<tr>
<td>Reference Signal</td>
<td>Frequency: 10 MHz (sine-wave) Input Power: -5 to +5 dBm Phase Noise: -120 dBc/Hz @100kHz -130 dBc/Hz @1kHz -140 dBc/Hz @10kHz</td>
</tr>
<tr>
<td>Phase Noise (SSB)</td>
<td>-60 dBc/Hz @100kHz -70 dBc/Hz @1kHz -80 dBc/Hz @10kHz -90 dBc/Hz @10kHz -100 dBc/Hz @1kHz</td>
</tr>
<tr>
<td>Input V.S.W.R.</td>
<td>2.0:1 max. @ IF Frequency</td>
</tr>
<tr>
<td>Output V.S.W.R.</td>
<td>2.0:1 max. @ RF Frequency</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>+12 to +30 VDC : NJT8103 / NJT8102 series +15 to +30 VDC : NJT5669 / NJT5670 / NJT5675 / NJT5677 series</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>48 W max. : (5W) NJT5669 / NJT5670 / NJT5675 / NJT5677 series 21 W typ., 25 W max. : (3W) NJT8103 series 18 W typ., 22 W max. : (2W) NJT8102 series</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>Operating : -40 to +60°C Storage : -40 to +75°C</td>
</tr>
<tr>
<td>Waterproof / Dustproof (IP Code)</td>
<td>IP 67</td>
</tr>
<tr>
<td>Dimension (without Interface Connector)</td>
<td>(L): 133.4 x (W): 85 x (H): 56 mm  (L): 131.3 x (W): 85 x (H): 56 mm  (L): 331 x (W): 335 x (H): 220 mm  (L): 190.6 x (W): 160 x (H): 59 mm  (L): 750 x (W): 630 x (H): 232 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>800 g (1.8 lbs) : NJT8103 / NJT8102 series 1.9 kg (4.2 lbs) : NJT5669 / NJT5670 / NJT5675 / NJT5677 series</td>
</tr>
</tbody>
</table>
**C-band LNA/LNB**

### Internal Reference Type: NJS8486 series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Local Stability (-40 to +60 °C)</th>
<th>IF Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJS8486H</td>
<td>3.400 to 4.200 GHz</td>
<td>5.15 GHz</td>
<td>950 to 1,750 MHz</td>
<td>+/- 10 ppm</td>
<td>F-type</td>
</tr>
<tr>
<td>NJS8486HN</td>
<td>(Palapa C-band)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJS8486E</td>
<td>3.400 to 4.200 GHz</td>
<td>5.15 GHz</td>
<td>950 to 1,750 MHz</td>
<td>+/- 50 kHz typ.</td>
<td>N-type</td>
</tr>
<tr>
<td>NJS8486EN</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJS8486UN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJS84887H</td>
<td>3.625 to 4.200 GHz</td>
<td>5.15 GHz</td>
<td>950 to 1,525 MHz</td>
<td>+/- 10 ppm</td>
<td>F-type</td>
</tr>
<tr>
<td>NJS84887HN</td>
<td>(Standard C-band)</td>
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</tr>
<tr>
<td>NJS84875</td>
<td>3.400 to 4.200 GHz</td>
<td>5.15 GHz</td>
<td>950 to 1,525 MHz</td>
<td>+/- 15 kHz typ.</td>
<td>N-type</td>
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<td>NJS8487UN</td>
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<tr>
<td>NJS84887H</td>
<td>4.500 to 4.800 GHz</td>
<td>5.76 GHz</td>
<td>960 to 1,260 MHz</td>
<td>+/- 10 ppm</td>
<td>F-type</td>
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<tr>
<td>NJS84887HN</td>
<td>(Insat C-band)</td>
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</tbody>
</table>

**Specifications**

- **Input Interface**: Waveguide, CPR 229 (with Groove)
- **Output Interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Noise Temperature (at +25 °C)**: 15 K
- **Conversion Gain (at +25 °C)**: 59 dBm
- **Requirement External Reference Signal (Only NJS8486 series is specified)**
  - **Input Port**: IF Connector (combine reference with IF signal)
  - **Frequency**: 10 MHz (sin-wave)
  - **Input Power**: -10 to 0 dBm
  - **Phase Noise**:
    - SSB: -70 dBc/Hz @100Hz, -80 dBc/Hz @1kHz, -85 dBc/Hz @10kHz
    - FSB: -90 dBc/Hz @100kHz
- **Phase Noise (SSB)**
  - Internal Reference Type: NJS8486 series
    - NJS8486H / NJS8486HN / NJS8486E / NJS8486EN
  - External Reference Type: NJS8486E series
    - NJS8486H / NJS8486HN / NJS8486E / NJS8486EN
- **Power Requirement**: +12 to +24 VDC
- **Operating Current**: 350 mA (Internal Reference type) NJS8486 series
- **Temperature Range (ambient)**
  - Operating: -40 to +60 °C
  - Storage: -40 to +80 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**
  - (L) 80.8 x (W) 99.6 x (H) 76 mm
  - (L) 3.18" x (W) 3.92" x (H) 2.99"
- **Weight**: 800 g [1.76 lbs]

### External Reference Type: NJS8486E series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Local Stability (-40 to +60 °C)</th>
<th>IF Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJS8486E</td>
<td>3.400 to 4.200 GHz</td>
<td>5.15 GHz</td>
<td>950 to 1,750 MHz</td>
<td>Depend on External Reference</td>
<td>F-type</td>
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<tr>
<td>NJS8486EN</td>
<td>(Palapa C-band)</td>
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<tr>
<td>NJS8487E</td>
<td>3.625 to 4.200 GHz</td>
<td>5.15 GHz</td>
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<td>NJS8487EN</td>
<td>(Standard C-band)</td>
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<tr>
<td>NJS8488E</td>
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</table>

**Specifications**

- **Input Interface**: Waveguide, CPR 229 (with Groove)
- **Output Interface**: Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
- **Noise Temperature (at +25 °C)**: 15 K
- **Conversion Gain (at +25 °C)**: 59 dBm
- **Requirement External Reference Signal (Only NJS8486E series is specified)**
  - **Input Port**: IF Connector (combine reference with IF signal)
  - **Frequency**: 10 MHz (sin-wave)
  - **Input Power**: -10 to 0 dBm
  - **Phase Noise**:
    - SSB: -70 dBc/Hz @100Hz, -80 dBc/Hz @1kHz, -85 dBc/Hz @10kHz
    - FSB: -90 dBc/Hz @100kHz
- **Phase Noise (SSB)**
  - Internal Reference Type: NJS8486E series
    - NJS8486E / NJS8486EN
  - External Reference Type: NJS8486 series
    - NJS8486H / NJS8486HN / NJS8486E / NJS8486EN
- **Power Requirement**: +12 to +24 VDC
- **Operating Current**: 350 mA (Internal Reference type) NJS8486E series
- **Temperature Range (ambient)**
  - Operating: -40 to +60 °C
  - Storage: -40 to +80 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**
  - (L) 80.8 x (W) 99.6 x (H) 76 mm
  - (L) 3.18" x (W) 3.92" x (H) 2.99"
- **Weight**: 800 g [1.76 lbs]

### PLL LNB [Internal & External Reference Type]: NJS8488E & NJS8486E series

**LNA : NJS8451 & NJS8452**

**Specifications**

- **Input Interface**: Waveguide, CPR 229 (with Groove)
- **Output Interface**: Coax. Connector, N-type female (50 ohm)
- **Noise Temperature (at +25 °C)**: 15 K
- **Gain (at +25 °C)**: 48 dB min., 55 dB max. (Palapa C-band) NJS8452
  - 55 dB min., 62 dB max. (Insat C-band) NJS8451
- **Input V.S.W.R.**: 3.0:1 @ RF Frequency
- **Output V.S.W.R.**: 2.0:1 @ RF Frequency
- **Power Requirement**: +12 to +28 VDC
- **Operating Current**: 125 mA typ., 160 mA max.
- **Temperature Range (ambient)**
  - Operating: -40 to +60 °C
  - Storage: -40 to +80 °C
- **Waterproof / Dustproof (IP Code)**: IP 67
- **Dimension (without Interface Connector)**
  - (L) 80.8 x (W) 99.6 x (H) 76 mm
  - (L) 3.18" x (W) 3.92" x (H) 2.99"
- **Weight**: 800 g [1.76 lbs]
Global Xpress® Ka-band 5W BUC & K-band PLL LNB

10W / 5W BUC : NJT5836 & NJT5835 series

<table>
<thead>
<tr>
<th>Model No.</th>
<th>RF Frequency</th>
<th>Local Frequency</th>
<th>IF Frequency</th>
<th>Output Power</th>
<th>IF Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJT5836L</td>
<td>27.652 to 28.388 GHz</td>
<td>26.600 GHz</td>
<td>1.052 to 1,788 MHz</td>
<td>+40 dBm Saturation (10W)</td>
<td>N-type</td>
</tr>
<tr>
<td>NJT5836H</td>
<td>28.172 to 29.071 GHz</td>
<td>27.200 GHz</td>
<td>972 to 1,871 MHz</td>
<td>+37 dBm Saturation (5W)</td>
<td></td>
</tr>
<tr>
<td>NJT5835L</td>
<td>27.652 to 28.388 GHz</td>
<td>26.600 GHz</td>
<td>1.052 to 1,788 MHz</td>
<td>+40 dBm Saturation (10W)</td>
<td></td>
</tr>
<tr>
<td>NJT5835H</td>
<td>28.172 to 29.071 GHz</td>
<td>27.200 GHz</td>
<td>972 to 1,871 MHz</td>
<td>+37 dBm Saturation (5W)</td>
<td></td>
</tr>
</tbody>
</table>

- **High Efficiency Output Power**
  - (10W Model)
  - Saturation Output Power: +40 dBm (10W)
  - Power Consumption: 170 W max.
  - (5W Model)
  - Saturation Output Power: +37 dBm (5W)
  - Power Consumption: 88 W max.

- **5W BUC : NJT5830**
  - **Global Xpress® Compliance**
  - RF Frequency: 29.0 to 30.0 GHz
  - Local Frequency: 28.05 GHz
  - IF Frequency: 950 to 1,950 MHz
  - **High Efficiency Output Power**
  - Output Power: +37 dBm (5W Linear)
  - ACPR: -20 dBc max. @ MOP
  - Power Consumption: 88 W max.

- **PLL LNB : NJR2825**
  - **Global Xpress® Compliance**
  - RF Frequency: 19.2 to 20.2 GHz
  - Local Frequency: 18.25 GHz
  - IF Frequency: 950 to 1,950 MHz
  - **High Local Stability**
  - Local Stability: +/- 3.0 ppm
  - **Low Noise Figure**
  - Noise Figure: 1.3 dB

03b Networks Ka-band 10W/5W BUCs & K-band PLL LNBs

10W / 5W BUC

- **High Temperature Operating**
  - Temperature Range: -40 to +73 °C

- **Reliable All-weather Performance**
- **Small Size & Light Weight**
  - Weight: 1.6 kg
  - Dimension: 180 x 100 x 50 mm

PLL LNB

- **Reliable All-weather Performance**
- **Small Size & Light Weight**
  - Weight: 400 g
  - Dimension: 85 x 68 x 34 mm

- **High Efficiency Output Power**
  - Output Power: +37 dBm (5W Linear)
  - ACPR: -20 dBc max. @ MOP
  - Power Consumption: 88 W max.

- **Ethernet M&C Function Equipped**
  - Gain Control: 15 dB range, 1 dB step
  - Power Monitor: 12 dBm dynamic range

- **Reliable All-weather Performance**
- **Small Size & Light Weight**
  - Weight: 4.5 kg
  - Dimension: 160 x 149.6 x 90 mm

PLL LNB

- **Reliable All-weather Performance**
- **Small Size & Light Weight**
  - Weight: 1.6 kg
  - Dimension: 180 x 100 x 50 mm

- **High Efficiency Output Power**
  - Output Power: +37 dBm (5W Linear)
  - ACPR: -20 dBc max. @ MOP
  - Power Consumption: 88 W max.

- **High Temperature Operating**
  - Temperature Range: -40 to +73 °C

- **Reliable All-weather Performance**
- **Small Size & Light Weight**
  - Weight: 4.5 kg
  - Dimension: 160 x 149.6 x 90 mm

- **Low Noise Temperature**
  - Noise Temperature: 101 K typ., 120 K max.

- **High LO Stability**
  - Local Stability: +/- 1.5 ppm

PLL LNB

- **Reliable All-weather Performance**
- **Small Size & Light Weight**
  - Weight: 500 g
  - Dimension: 150 x 80 x 30 mm

- **High Efficiency Output Power**
  - Output Power: +37 dBm (5W Linear)
  - ACPR: -20 dBc max. @ MOP
  - Power Consumption: 88 W max.
**INDOOR 150W AC/DC PSU**

The features of Indoor 150W AC/DC Power Supply Unit (PSU) are to provide the stable +48V DC power to operate both C-band 8W/10W and Ku-band 8W BUCs, even if inner power supply of the modem is not capable enough to operate these BUCs.

The indoor AC/DC PSU, which is having enough power supply of 150W as well as having the bias-tee which enable to pass 10MHz reference signal and IF signal from the modem, is operated by AC Power and enable to operate these BUCs.

In addition the indoor 150W AC/DC PSU complies with **UL CERTIFICATION** and **EC DIRECTIVE** and this housing can fit the 1U rack mount with optional kit.

**Overview**

Applicable Models:
NJT5118, NJT5218, NJT5762, NJT5763, NJT5764, and NJT8318 series

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**OUTDOOR 250W AC/DC PSU**

The features of Outdoor 250W AC/DC Power Supply Unit (PSU) are to provide the stable +48V DC power to operate Ku-band 16W/25W BUC, even if power supply of the equipment is not capable enough to operate the BUC.

This unit employs the aluminum housing with corrosion-proof treatment on the surface and has air-sealing structure in order to use perfectly as the outdoor unit.

In addition, the outdoor 250W AC/DC PSU complies with **EC DIRECTIVE**.

**Overview**

Applicable Models:
NJT8319 and NJT8370 series
OUTDOOR 500W AC/DC PSU

The features of Outdoor 500W AC/DC Power Supply Unit (PSU) are to provide the stable +51V DC power to operate Ku-band 40W BUC, even if power supply of the equipment is not capable enough to operate the BUC. This unit employs the aluminum housing with corrosion-proof treatment on the surface and has air-sealing structure in order to use perfectly as the outdoor unit. In addition, the outdoor 500W AC/DC PSU complies with EC DIRECTIVE.

Overview

Outdoor 500W AC/DC PSU

Applicable Models: NJT8371 series

ACCESSORIES

The following mount brackets and cables are prepared as generic options.

Mount Bracket Option

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJZ1290D01</td>
<td>Mount Bracket for NJT8318 [Ku-band 8W BUC]</td>
</tr>
<tr>
<td></td>
<td>Mount Bracket for NJT8319 [Ku-band 16W BUC]</td>
</tr>
<tr>
<td></td>
<td>Mount Bracket for NJT8370 [Ku-band GaN 25W BUC]</td>
</tr>
<tr>
<td>NJZ1290D05</td>
<td>Mount Bracket for NJT8371 [Ku-band GaN 40W BUC]</td>
</tr>
<tr>
<td>NJZ1290D02</td>
<td>Mount Bracket for NJZ1289 [Outdoor 250W AC/DC PSU]</td>
</tr>
<tr>
<td>NJZ1290D04</td>
<td>Mount Bracket for NJZ1295 [Outdoor 500W AC/DC PSU]</td>
</tr>
</tbody>
</table>

Cable Option

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJZ1290A01</td>
<td>AC Power Cable of 3 m length for NJZ1289 [Outdoor 250W AC/DC PSU] Connecting between NJZ1289 and AC outlet</td>
</tr>
<tr>
<td>NJZ1290A02</td>
<td>DC Power Cable of 5 m length for NJZ1289 [Outdoor 250W AC/DC PSU] Connecting between NJZ1289 and BUC</td>
</tr>
<tr>
<td>NJZ1290A03</td>
<td>AC Power Cable of 3 m length for NJZ1295 [Outdoor 500W AC/DC PSU] Connecting between NJZ1295 and AC outlet</td>
</tr>
<tr>
<td>NJZ1290A04</td>
<td>DC Power Cable of 5 m length for NJZ1295 [Outdoor 500W AC/DC PSU] Connecting between NJZ1295 and BUC</td>
</tr>
</tbody>
</table>
GENERAL PRECAUTIONS

Use the following safety instructions and guidelines and to help protect the products from potential damage and to help ensure your own personal safety.

**BUCs Instructions:**

- **Sealing Film**
  - **CAUTION:** DO NOT remove the film on the waveguide when the unit has it. If the film is removed, it may lose the performance of waterproof.

- **WG Filter**
  - **CAUTION:** DO NOT touch the filter in the waveguide. The filter is used for Rx-band rejection. If the filter is damaged or dirty, it may not reject a sufficient quantity of false Rx-bands and could damage BUC internals.

- **Fins**
  - **WARNING:** DO NOT touch the body, especially fins, when the product is running. It is hot. DO NOT block the fins. Normally the BUC should be mounted with fins face up.

- **Input RF Level**
  - **CAUTION:** DO NOT supply RF signal over the absolute maximum rating of -10 dBm @ CW or +10 dBm @ Pulse.

- **Product Label**
  - **CAUTION:** DO NOT remove the label. This is for our QA traceability.

- **Connector**
  - **CAUTION:** Connect the IF cable with 0.68 to 1.13 N·m torques.

- **Input Voltage**
  - **CAUTION:** Apply DC voltage within the range indicated on product label. BUCs are operated at the input voltage of +12 to +30VDC, +15 to +24VDC, +15 to +30VDC, +18 to +60VDC, or +36 to +60VDC.

- **Input IF Level**
  - **CAUTION:** DO NOT supply IF signal over the maximum level indicated on product label of +10 or +13 dBm.

- **10MHz Reference**
  - **CAUTION:** Supply 10MHz reference signal within the range of -5 to +5 dBm.

**LNBs Instructions:**

- **Sealing Film**
  - **CAUTION:** DO NOT remove the film on the waveguide when the unit has it. If the film is removed, it may lose the performance of waterproof.

- **Cover**
  - **CAUTION:** DO NOT open the cover. Although the unit is completely waterproof, if the cover is opened, the warranty will become invalid.

- **Input RF Level**
  - **CAUTION:** DO NOT supply RF signal over the absolute maximum rating of -10 dBm @ CW or +10 dBm @ Pulse.

- **Product Label**
  - **CAUTION:** DO NOT remove the label. This is for our QA traceability.

- **Connector**
  - **CAUTION:** Connect the IF cable with 0.68 to 1.13 N·m torques.

- **Input Voltage**
  - **CAUTION:** Apply DC voltage within the range indicated on product label. LNBs are operated at the input voltage of +12 to +30VDC, +15 to +24VDC, +15 to +30VDC, +18 to +60VDC, or +36 to +60VDC.

- **Cover**
  - **CAUTION:** DO NOT open the cover. Although the unit is completely waterproof, if the cover is opened, the warranty will become invalid.

- **Input IF Level**
  - **CAUTION:** DO NOT supply IF signal over the maximum level indicated on product label of +10 or +13 dBm.

- **FG**
  - **CAUTION:** DO NOT touch the body, especially fins, when the product is running. It is hot. DO NOT block the fins. Normally the BUC should be mounted with fins face up.

- **Connector**
  - **CAUTION:** Connect the IF cable with 0.68 to 1.13 N·m torques.

- **Input Voltage**
  - **CAUTION:** Apply DC voltage within the range indicated on product label. LNBs are operated at the input voltage of +12 to +30VDC, +15 to +24VDC, +15 to +30VDC, +18 to +60VDC, or +36 to +60VDC.

- **Sealing Film**
  - **CAUTION:** DO NOT remove the film on the waveguide when the unit has it. If the film is removed, it may lose the performance of waterproof.

**PRODUCT LABEL**

The common product label with following format is employed for both of all LNBs and BUCs manufactured by New Japan Radio Co., Ltd.

**Label Format:**

- **Product Name**
- **Model Number**
- **Model Number Bar-code [CODE 39]**
- **WEEE Logo**
- **RoHS Compliant**
- **CE Marking**

**Applicable Models:** All models of LNB and BUC
DECLARATION OF EC DIRECTIVE

New Japan Radio Co., Ltd. declare that all of the BUCs and LNBs are in compliance with the regulations which standard are required for EMC directive 2014/30/EU and Reduction of Hazardous Substance (RoHS) directive 2011/65/EU, and (EU)2015/863.

MUTE FUNCTION

Mute function which shut off the HPA function due to local unlocked or no 10MHz reference signal is equipped for all BUCs.

Applicable Models: All models of BUC

LED INDICATOR

BUC products integrated with LED Indicator show normal or abnormal conditions.

<table>
<thead>
<tr>
<th>Status Chart</th>
<th>LED Location (For Example)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DC Power</strong></td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td>LED</td>
</tr>
<tr>
<td>ON</td>
<td></td>
</tr>
<tr>
<td><strong>10 MHz Reference Signal</strong></td>
<td></td>
</tr>
<tr>
<td>OFF or LO unlocked</td>
<td></td>
</tr>
<tr>
<td><strong>ON</strong></td>
<td></td>
</tr>
<tr>
<td>&quot;Normal&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Applicable Models: Specified BUCs

FSK COMMUNICATIONS M&C

The BUC equipped FSK communications M&C includes capability to communicate with a IDU (e.g. satellite modem or M&C controller). The signal of the M&C is multiplexed onto the IF coaxial cable with the IF signal, 10 MHz reference, and DC power between the BUC and the IDU. The M&C implements commands to control BUC functions and to query the BUC for configuration or status information.

Functions

<table>
<thead>
<tr>
<th>CONTROL</th>
<th>MONITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Status</td>
<td>Output Power Monitor</td>
</tr>
<tr>
<td>Set Transmit On/Off Control</td>
<td>* Detector Range: 20 dB (up to P1 dB)</td>
</tr>
<tr>
<td></td>
<td>* Accuracy: +/- 1.0 dB</td>
</tr>
<tr>
<td></td>
<td>* Temperature Monitor</td>
</tr>
<tr>
<td></td>
<td>etc</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>* Temperature Out-of-Range</td>
</tr>
<tr>
<td></td>
<td>* PLL Out-of-Lock</td>
</tr>
<tr>
<td></td>
<td>* Tx Status</td>
</tr>
</tbody>
</table>

Applicable Models: NJT5762, NJT8318, NJT8319, NJT8370 and NJT8371 series

RS-232C INTERFACE M&C

The BUC equipped RS-232C interface M&C includes capability to communicate with a IDU (e.g. M&C controller or personal computer). The signal of the M&C is compliance with RS-232C and the M&C implements commands to control BUC functions and to query the BUC for configuration or status information.

Functions

<table>
<thead>
<tr>
<th>CONTROL</th>
<th>MONITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Status</td>
<td>Output Power Monitor</td>
</tr>
<tr>
<td>Transmit On/Off Control</td>
<td>* Detector Range: 15 dB (up to P1 dB/psal)</td>
</tr>
<tr>
<td></td>
<td>* Accuracy: +/- 1.0 dB</td>
</tr>
<tr>
<td>Step Attenuator Setting</td>
<td>Temperature Monitor</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>* Temperature Out-of-Range</td>
</tr>
<tr>
<td></td>
<td>* PLL Out-of-Lock</td>
</tr>
<tr>
<td></td>
<td>* Tx Status</td>
</tr>
<tr>
<td></td>
<td>etc</td>
</tr>
</tbody>
</table>

Applicable Models: NJT8318, NJT8319, NJT8370 and NJT8371 series
CSR VISION

New Japan Radio group’s corporate social responsibility is “To realize the corporate mission while continuing to contribute to the healthy development of society.” To this end, we are committed to:

- Being aware that we are a part of society.
- Considering at all times what can be done to make society develop and to create better lifestyles for people by providing optimum components based on the two “μ” technologies.
- Striving to develop relationships of trust, and meeting the expectations of the community and stakeholders.
- Contributing to the realization of a sustainable society.

QUALITY & ENVIRONMENTAL MANAGEMENT

The New Japan Radio group strives to contribute to quality and the environment by maintaining and improving two management systems which are positioned as part of quality management and environmental management. In order to facilitate quality management and environmental management, we declare the Quality and Environmental Vision as the superior guidelines for the New Japan Radio group. Moreover, basic quality/environmental policies are also set at each company where activities focusing on the improvement and management of quality and the environment are being carried out.

QUALITY VISION

The New Japan Radio Group provides products and services meeting quality expectations of society and customers by ingenious technologies and originality of all the members.

ENVIRONMENTAL VISION

The New Japan Radio Group recognizes that protecting the global environment is a significant universal subject to ensure sustainable growth and is corporate social responsibility, and we act based on considering the environmental protection in all of corporate activity.

QUALITY & ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION

ISO 9001 : 2015
Registration Date: November 25, 1994
Last Renewal Date: January 10, 2018
Expiry Date: January 9, 2021
Certification Number: JQA-0686
Certification Organization: JQA (*)

(*) JQA: Japan Quality Assurance Organization

ISO 14001 : 2015
Registration Date: December 17, 2004
Last Renewal Date: January 13, 2018
Expiry Date: January 12, 2021
Certification Number: JQA-EM4431
Certification Organization: JQA
1. While New Japan Radio, Ltd. (NJR) continually strives to improve the quality and reliability of any products, failures would occur in microwave products over time. For this reason, it is important that customers fulfill their responsibilities to ensure designed-in safety – including fail-safe functions, redundancy, and measures to prevent malfunctions and the spread of fire – in order to avoid injuries, accidents, or social repercussions resulting from the failure of any product related to satellite communications on this document (hereinafter, “the product”). Customers must pay careful attention to ensuring the safety of their equipment.

2. The product is designed and tested to function in accordance with its specifications. Do not use under conditions that deviate from the product specifications included in the specifications. NJR assumes no responsibility and shall not be liable for any injuries, accidents, or social repercussions resulting from the product being in a poor or damaged state because it was used under conditions that depart from the specifications.

3. The product is covered by a warranty for one year following delivery unless otherwise stipulated in the contract or delivery conditions. In the event of a failure for which NJR are responsible occurring during the warranty period, NJR undertake to repair or replace the product free of charge. Note, however, that the warranty does not cover failures such as those listed here (see bullets below), even if they occur within the warranty period. In addition, in the case of a product being repaired or replaced by us, the starting date for the warranty period is still the original delivery date of the product.
   - Failure due to the product being used in conditions other than those stipulated in the data sheet, specification sheet, etc.
   - Failure due to modifications or repairs carried out by some entity other than our company
   - Failure determined to be the result of unsuitable maintenance or replacement of a consumable item that requires due maintenance
   - Failure due to circumstances that were unforeseeable given the scientific/technological standards at the time of shipment
   - Other failures due to external factors such as fire, earthquake, flood and power supply anomalies for which NJR are not responsible

In addition, the product warranty is limited to the provision of repair services or replacement at no cost. It does not cover secondary damage (to equipment, business opportunities, profits, etc.) or any other damage that may have resulted from failure of the product.

4. The product must be handled appropriately to ensure its continued reliability. Since it can be damaged by the intrusion of water, dust, oil, chemicals, etc., it must be given appropriate protection. Even in the case of a product with an airtight construction, avoid using it in an environment that exceeds the stated levels of waterproofing/dustproofing. Also, be sure to use connectors and waveguides properly.
   If replacement parts such as fans are included, proper maintenance is necessary. To maintain product performance and functionality, it is necessary to conduct inspections and maintenance at appropriate intervals and exchange replacement parts when necessary. Improper inspections or maintenance may result in failure.
   In addition, the warranty does not cover the use of the product in areas where salt damage can be expected or where there is a substantial presence of corrosive gases such as Cl₂, H₂S, SO₂, and NO₂. If the product is to be used in such areas, at the time of installation you must take appropriate steps to protect the product.

5. If the product is to be used with equipment/systems that must meet special quality and reliability standards (aerospace equipment, medical equipment, power generation control equipment, automotive/railway transportation equipment, safety equipment, disaster prevention and security equipment, etc.), please consult with our sales staff in advance.

6. This product contains gallium arsenide (GaAs), classified as a harmful substance. To avoid danger, do not incinerate, crush, or chemically treat the product in such a way that gases or dust are released. When disposing of the product, comply with all applicable laws and regulations and do not treat it as general industrial waste or household waste.

7. When exporting a product or technology, observe export laws and regulations such as those governing foreign exchange and foreign trade, and obtain any necessary licenses for export, service transactions, etc. NJR request that you do not use our products or the technical data published on this document for developing weapons of mass destruction or for any other military purposes or applications.

8. The product specifications on this document are subject to change without notice. If you are considering using a product, delivery specifications must first be settled.
New Japan Radio Co., Ltd. (NJR) was founded in 1959, as the progeny of Japan Radio Co., Ltd., and has emerged as pioneer in microwave and semiconductor technologies in Japan. Since then, NJR has devoted their own technologies to develop the products. Now, under the concept of "μ & μ" development which means the convergence of "Microelectronics" and "Microwave" to expand their technology, NJR sets to meet demands of the ubiquitous age. NJR has three business segments:

- Semiconductor devices
- Microwave application products
- Microwave tubes and radar components

Creating a future through the convergence of "Microelectronics" and "Microwave" (μ & μ)

Microwave Division is one of divisions engaged in NJR which has kept supplying reliable components, created through the concept of "μ & μ", in microwave fields. Components which Microwave Division has been supplying are as shown below.

- LNBs for VSAT
- BUCs and Transceiver for VSAT
- RF units for FWA/BWA
- Sensing devices for security, safety, saving energy, and etc (Doppler module and FMCW radar modules)
- Electron tubes and peripheral devices
- Electron guns and cathodes

Microwave Division will keep complying with any requirements to be brought from the market.

*Note: The contents of this catalogue are subject to change without notice.