



VSAT



Products Line-up

2016-2017



New Japan Radio Co., Ltd.



PRODUCTS LINE-UP

V SAT
PRODUCTS

2016-2017

Ku-band BUC

Output Power ↑	High Power	40W GaN 25W GaN 16W	(NEW!) NJT8371 series (NEW!) NJT8370 series NJT8319 series
	Middle Power	8W 6W 4W	NJT8318 series NJT5218 / NJT5118 series NJT8306 series (NEW!) NJT8304 series NJT5207 / NJT5307 series
	Low Power	3W 1.5W	NJT8302 series NJT8301 series
			Standard Ku 14.0 to 14.5 GHz Universal Ku 13.75 to 14.5 GHz
			Frequency →

Ku-band LNB

Oscillation Type ↑	PLL Multi-LO	2LO [Ext. Ref.] Int. Ref.]	NJR2841 series (Local Frequency Selected by Mechanical Switch) NJR2842 series (Local Frequency Selected by 22kHz Tone) NJR2843 series (Local Frequency Selected by Input Voltage)				
	PLL Single-LO	Ext. Ref. Int. Ref.]	NJR2937E NJR2837	NJR2939E NJR2839	NJR2935E NJR2835	NJR2934E	NJR2936E NJR2836
	DRO	DRO	NJR2784H		NJR2744H		NJR2754H
			Ku 10.95 to 11.7 GHz 11.2 to 11.7 GHz 11.7 to 12.2 GHz 12.2 to 12.75 GHz 12.25 to 12.75 GHz Universal Ku 10.7 to 12.75 GHz				
			Frequency →				

C-band BUC

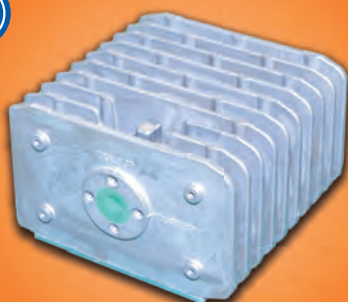
Output Power ↑	Middle Power	10W	NJT5763 series		NJT5764 series
		8W	NJT5762 series		
		5W	NJT5760 series		
	Low Power		NJT5677 series		
			NJT5669 series	NJT5675 series	NJT5670 series
	3W	(NEW!) NJT8103 series			
		NJT5679 series			
	2W	(NEW!) NJT8102 series			
		NJT5667 series	NJT5674 series	NJT5668 series	
Standard C 5.850 to 6.425 GHz Palapa C 6.365 to 6.725 GHz Insat C 6.725 to 7.025 GHz					
Full C 5.850 to 6.725 GHz					
Frequency →					

C-band LNA/LNB

Oscillation Type ↑	PLL LNB	Ext. Ref.	NJS8486E series	NJS8487E series	NJS8488E series
		Int. Ref.	NJS8486 series	NJS8487 series	NJS8488 series
	LNA	LNA	NJS8452		NJS8451
Palapa C 3.400 to 4.200 GHz Standard C 3.625 to 4.200 GHz Insat C 4.500 to 4.800 GHz					
Frequency →					

NEW Ka-band 3W / K-band PLL Transceiver (XCVR)

NEW



3W XCVR

3W XCVR : NJT5853 series**● RF Frequency**

TX: 29.5 to 30.0 GHz with 28.55 GHz LO
Customized Range: 29.0 to 30.0 GHz
 RX: 19.2 to 20.2 GHz with 18.25 GHz LO

● High Efficiency Output Power

Saturation Output Power: +35 dBm (3W)
 Power Consumption: 35 W max.

● OMT and TRF Equipped

Noise Figure: 1.6 dB max.
 including OMT+TRF

Tx-to-Rx Isolation: 80 dBc

Polarizer Option

● All-weathered Compact Housing

Weight: 1.8 kg
 Dimension: 118 x 120 x 77 mm

● Antenna Option

74 cm Antenna : 44.2 dBi @ 29 GHz

98 cm Antenna : 46.4 dBi @ 29 GHz

120 cm Antenna : 48.9 dBi @ 29 GHz

03b Networks Ka-band 10W/5W BUCs & K-band PLL LNBs**10W / 5W BUC : NJT5836 & NJT5835 series**

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power	IF Connector
NJT5836L	27.652 to 28.388 GHz	26.600 GHz	1,052 to 1,788 MHz	+40 dBm Saturation (10W)	N-type
NJT5836H	28.172 to 29.071 GHz	27.200 GHz	972 to 1,871 MHz		
NJT5835L	27.652 to 28.388 GHz	26.600 GHz	1,052 to 1,788 MHz	+37 dBm Saturation (5W)	
NJT5835H	28.172 to 29.071 GHz	27.200 GHz	972 to 1,871 MHz		

● 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.

● 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 : NJR2828 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-20 to +50 °C]	IF Connector
NJR2828L	17.852 to 18.588 GHz	16.800 GHz	1,052 to 1,788 MHz	+/- 1.5 ppm	N-type
NJR2828H	18.372 to 19.300 GHz	17.400 GHz	972 to 1,900 MHz	(+/- 25 kHz typ.)	

● Low Noise Temperature

Noise Temperature: 101 K typ., 120 K max.

● High LO Stability

Local Stability: +/- 1.5 ppm

● Reliable All-weather Performance**● Small Size & Light Weight**

Weight: 500 g
 Dimension: 150 x 80 x 30 mm



10W / 5W BUC



PLL LNB

Global Xpress® Ka-band 5W BUC & K-band PLL LNB**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.

● 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



5W BUC

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

● High Temperature Operating

Temperature Range: -40 to +73 °C

● Reliable All-weather Performance**● Small Size & Light Weight**

Weight: 400 g
 Dimension: 85 x 68 x 34 mm

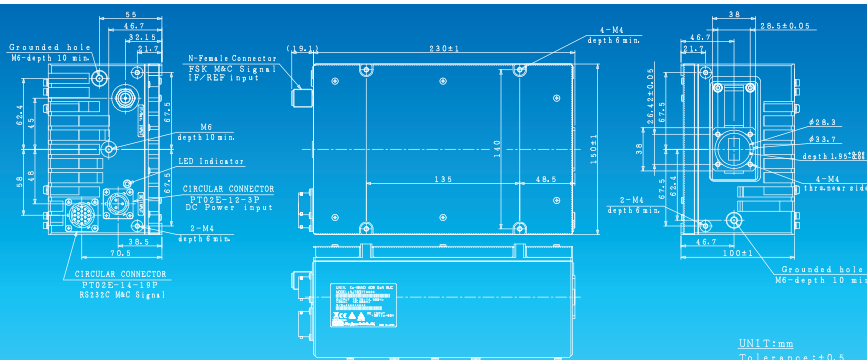


PLL LNB

NEW Ku-band GaN 40W ROBUST-BUC: NJT8371 series



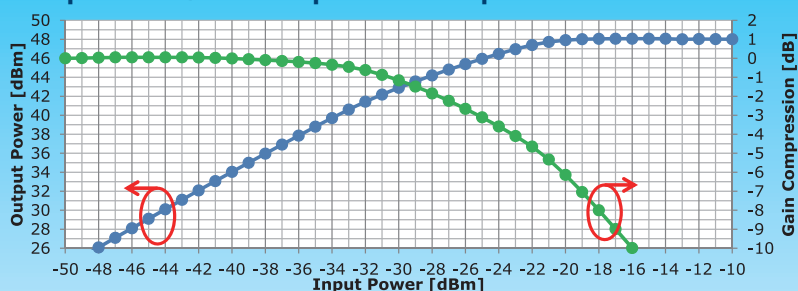
NEW



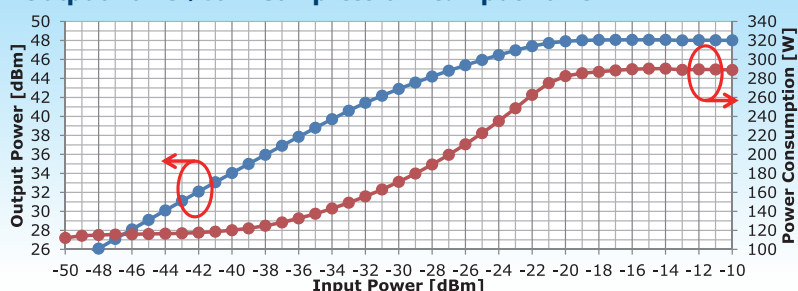
- **GaN Technology Amplifier Inside**
- **High Efficiency Output Power**
Saturation Output Power: **+46.0 dBm**
ACPR: **-30 dBc @ Pout ≤ +44 dBm**
Power Consumption: **260 W**
- **Monitor & Control Functions**
TX Output Power Monitor
Step Attenuator (31.5dB)
Alarm / TX On/Off Control
- **FSK Communications M&C Option**
- **RS-232C Interface M&C Option**
- **AC Power Operation Option** *Note
- **Compact Size & Light Weight**
Dimension: **230 x 150 x 100 mm**
Weight: **4.2 kg**
- **LED Indicator Equipped**

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

➤ Output Power/Gain Compression vs. Input Power



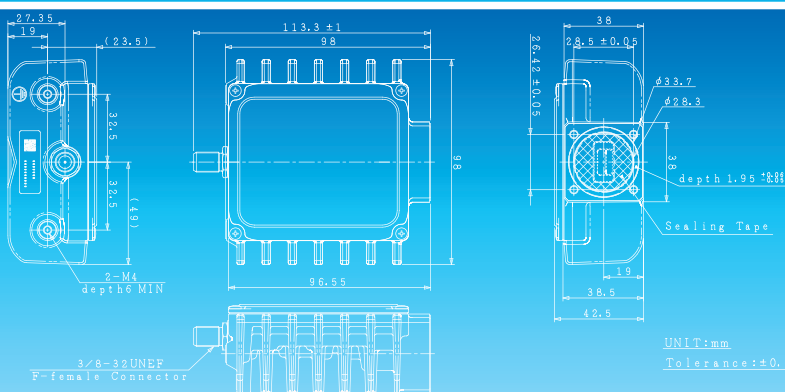
➤ Output Power/Gain Compression vs. Input Power



NEW Ku-band 4W COMPACT-BUC: NJT8304 series

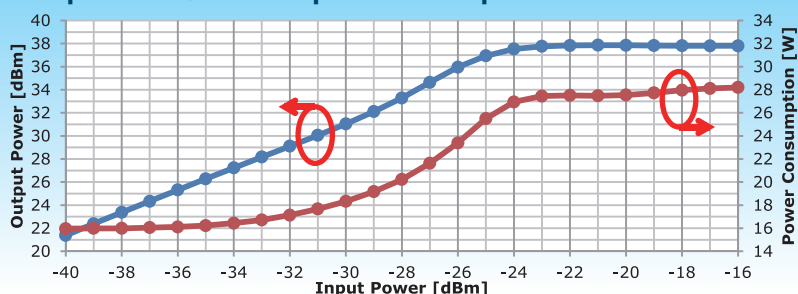


NEW

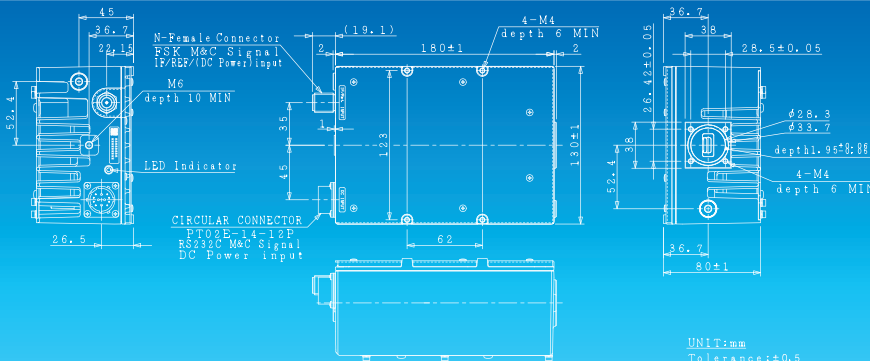


- **Leading Technology Equipped**
- **Super High Efficiency & Low Distortion**
P1dB: **+36.0 dBm min. over Temperature**
ACPR: **-26 dBc @ Pout ≤ +35.5 dBm**
Power Consumption: **28 W**
- **Smaller Size & Lighter Weight**
Dimension: **98 x 98 42.5 mm**
Weight: **500 g**

➤ Output Power/Gain Compression vs. Input Power



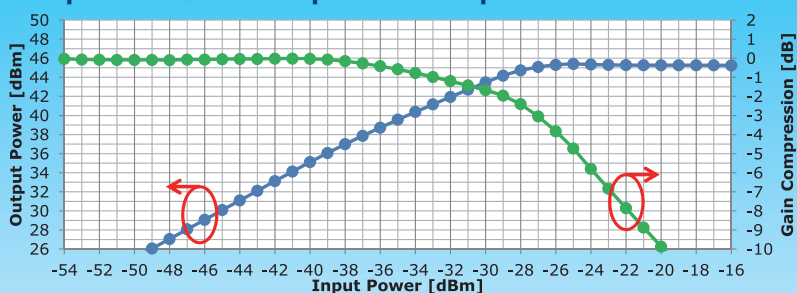
NEW Ku-band GaN 25W MINI-BUC: NJT8370 series



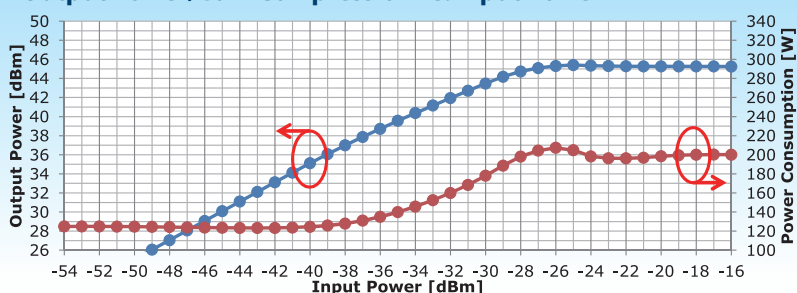
- **GaN Technology Amplifier Inside**
- **High Temperature Operating**
Operation Temperature Range: **-40 to +75 °C**
- **High Efficiency Output Power**
Saturation Output Power: **+44.0 dBm**
ACPR: **-30 dBc @ Pout ≤ +42 dBm**
Power Consumption: **190 W**
- **Monitor & Control Functions**
TX Output Power Monitor
Step Attenuator (31.5dB)
Alarm / TX On/Off Control
- **FSK Communications M&C Option**
- **RS-232C Interface M&C Option**
- **AC Power Operation Option** *Note
- **Compact Size & Light Weight**
Dimension: **180 x 130 x 80 mm**
Weight: **2.5 kg**
- **LED Indicator Equipped**

*Note: The detail is shown in section of "OUTDOOR 250W AC/DC PSU".

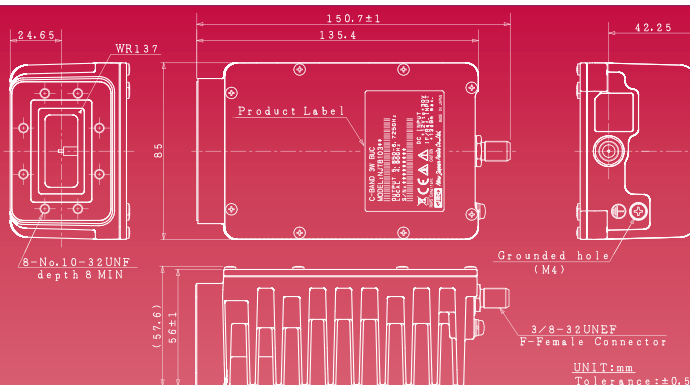
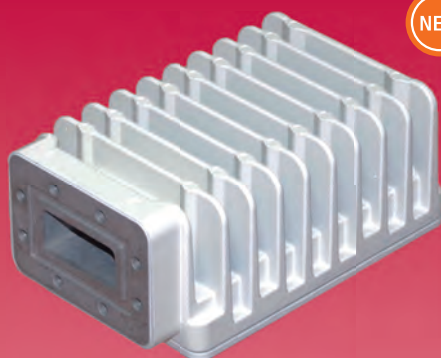
➤ Output Power/Gain Compression vs. Input Power



➤ Output Power/Gain Compression vs. Input Power



NEW C-band 2W & 3W COMPACT-BUC: NJT8102 & NJT8103 series



- **Covering Full C-band Frequency**
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 x 85 x 56 mm
Weight: 800 g

- ## ➤ High Efficiency Output Power
- < **3W Model: NJT8102 series** >
 - P1dB: +34.5 dBm min. over Temperature
 - ACPR: -24 dBc @ Pout ≤ +34.5 dBm
 - Power Consumption: 21 W
 - < **2W Model: NJT8102 series** >
 - P1dB: +33.0 dBm min. over Temperature
 - ACPR: -24 dBc @ Pout ≤ +33.0 dBm
 - Power Consumption: 18 W

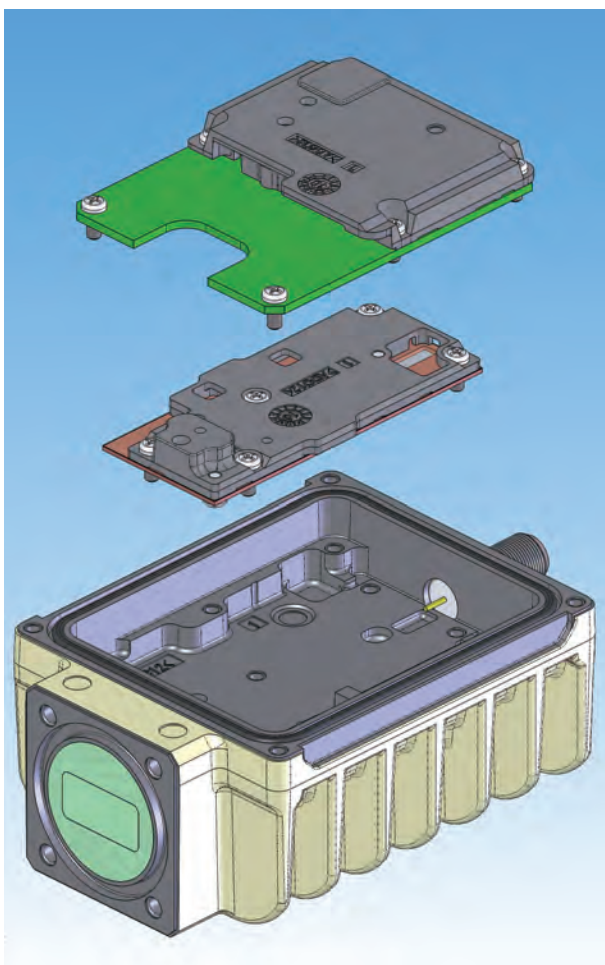
Ku-band Bare-Die-Module BUC

Feature

Miniaturization and stable characteristics by the following advantage technologies

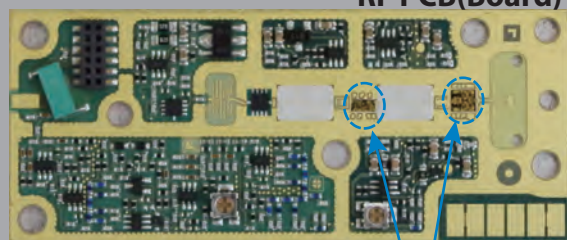
Advantage

- 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



Bare-Die-Module

RF PCB(Board)



RF-PA Bare-Die assembly



GaN 40W BUC

NEW



GaN 25W BUC

NEW



16W/8W BUC



6W BUC



4W BUC

NEW



3W/1.5W BUC

■ GaN 40W 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

■ GaN 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: 190 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: -26 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



Ku-band BUC

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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
NEW	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+46 dBm (40W)	N-type	FSK	NA	DC Power	Equipped
					F-type	Communications	Enclosed ^{*Note3}	Input Port: MS Connector	
					N-type	M&C ^{*Note1}	Outdoor AC/DC PSU	DC Power	
					F-type		Supplied by Outdoor AC/DC PSU	Supplied by Outdoor AC/DC PSU	
					N-type	RS-232C Interface	NA	DC Power	
					F-type		Input Port: MS Connector	Input Port: MS Connector	
					N-type	M&C ^{*Note2}	Enclosed ^{*Note3}	DC Power	
NEW	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		F-type	Communications	Outdoor AC/DC PSU	Supplied by Outdoor AC/DC PSU	
					N-type	FSK	NA	DC Power	
					F-type	Communications	Enclosed ^{*Note3}	Input Port: MS Connector	
					N-type	M&C ^{*Note1}	Outdoor AC/DC PSU	DC Power	
					F-type		Supplied by Outdoor AC/DC PSU	Supplied by Outdoor AC/DC PSU	
					N-type	RS-232C Interface	NA	DC Power	
					F-type		Input Port: MS Connector	Input Port: MS Connector	
					N-type	M&C ^{*Note2}	Enclosed ^{*Note3}	DC Power	
					F-type		Outdoor AC/DC PSU	Supplied by Outdoor 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".

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



NEW Standard Ku 40W: NJT8371 series

NEW Universal Ku 40W: NJT8371U series

Specifications

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 @ Saturation	+46 dBm min. @ +25 °C / +45 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) 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)	-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.	1.5 : 1 max. @ RF Frequency
Power Requirement	+36 to +60 VDC at BUC Input Port 90 to 264 VAC at Outdoor AC/DC PSU: (AC Power Option) NJT8371NMKA / 71FMKA / 71NMRA / 71FMRA / 71UNMKA / 71UFMKA / 71UNMRA / 71UFMRA
Power Consumption	220 W typ. @ Pout=+44dBm 260 W typ., 290 W max. @ Psat
Port for Voltage Input	MS Connector : NJT8371NMK / 71FMK / 71NMR / 71FMR / 71UNMK / 71UFMK / 71UNMR / 71UFMR MS Connector supplied by Outdoor AC/DC PSU : NJT8371NMKA / 71FMKA / 71NMRA / 71FMRA / 71UNMKA / 71UFMKA / 71UNMRA / 71UFMRA
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Cooling	Forced-air-cooling by FAN
Dimension (without Interface Connector)	(L) 230 × (W) 150 × (H) 100 mm [(L) 9.07" × (W) 5.91" × (H) 3.94"]
Weight	4.2 kg [9.7 lbs]

Model Numbering System

N J T 8 3 7 1 U N M K A

AC Power Operating Option - Non Suffix: N/A
A: Enclosed AC/DC PSU for BUC ^{*Note4}

M&C Function Option - Non Suffix: N/A
K: FSK communications M&C Equipped
R: RS-232C Interface M&C Equipped

DC Input Connector - Non Suffix: IF Interface Connector
M: MS Connector (or IF Interface Connector) ^{*Note5}

IF Interface Connector - N: N-type (50 ohms), Female Connector
F: F-type (75 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)

Output Power - 71: +46.0 dBm (40W) @ Saturation
70: +44.0 dBm (25W) @ Saturation
19: +42.0 dBm (16W) @ 1dB G.C.P.
18: +39.0 dBm (8W) @ 1dB G.C.P.

Product Series Model Number

*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 250W AC/DC PSU.
In case of 8W BUC: NJT8318 series, the enclosed unit is Indoor 150W AC/DC PSU.

*Note5: 40W BUC: NJT8371 series and 25W BUC: NJT8370 series can be applied DC voltage via only MS Connector.
16W BUC: NJT8319 series and 8W BUC: NJT8318 series are available to apply DC voltage via either MS Connector or IF Connector.



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GaN 25W MINI-BUC : NJT8370 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ Saturation	IF Connector	M&C Function	AC Power Option	Power Supply	LED Indicator
NEW	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+44 dBm (25W)	N-type	FSK	NA	DC Power	Equipped
					F-type	Communications	Enclosed ^{*Note6}	Input Port: MS Connector	
					N-type	M&C ^{*Note1}	Outdoor AC/DC PSU	DC Power	
					F-type			Supplied by Outdoor AC/DC PSU	
					N-type	RS-232C Interface	NA	DC Power	
					F-type			Input Port: MS Connector	
					N-type	M&C ^{*Note2}	Enclosed ^{*Note6}	DC Power	
NEW	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		F-type		Outdoor AC/DC PSU	Supplied by Outdoor AC/DC PSU	
					N-type	FSK	NA	DC Power	
					F-type	Communications	Enclosed ^{*Note6}	Input Port: MS Connector	
					N-type	M&C ^{*Note1}	Outdoor AC/DC PSU	DC Power	
					F-type			Supplied by Outdoor AC/DC PSU	
					N-type	RS-232C Interface	NA	DC Power	
					F-type			Input Port: MS Connector	
NEW					N-type	M&C ^{*Note2}	Enclosed ^{*Note6}	DC Power	
					F-type		Outdoor AC/DC PSU	Supplied by Outdoor 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".

*Note6: The detail is shown in section of "OUTDOOR 250W AC/DC PSU".



NEW Standard Ku 25W: NJT8370 series

NEW Universal Ku 25W: NJT8370U series

Specifications

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 @ Saturation	+44 dBm min. @ +25 °C / +43 dBm min. over temperature
Conversion Gain	70 dB nom., 64 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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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	+36 to +60 VDC at BUC Input Port 90 to 264 VAC at Outdoor AC/DC PSU: (AC Power Option) NJT8370NMKA / 70FMKA / 70NMRA / 70FMRA / 70UNMKA / 70UFMKA / 70UNMRA / 70UFMRA
Power Consumption	160 W typ. @ Pout=+42dBm 190 W typ., 210 W max. @ Psat
Port for Voltage Input	MS Connector : NJT8370NMK / 70FMK / 70NMR / 70FMR / 70UNMK / 70UFMK / 70UNMR / 70UFMR MS Connector supplied by Outdoor AC/DC PSU : NJT8370NMKA / 70FMKA / 70NMRA / 70FMRA / 70UNMKA / 70UFMKA / 70UNMRA / 70UFMRA
Temperature Range (ambient)	Operating : (Operation Guarantee) -40 to +75 °C (Performance Guarantee) -40 to +60 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Cooling	Forced-air-cooling by FAN
Dimension (without Interface Connector)	(L) 180 × (W) 130 × (H) 80 mm (L) 180 × (W) 130 × (H) 80 mm
Weight	2.5 kg [5.5 lbs]



Ku-band BUC

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16W MINI-BUC : NJT8319 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	M&C Function	AC Power Option	Power Supply	LED Indicator
NJT8319UN	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+42 dBm min. (16W)	N-type	NA	NA	DC Power	Equipped
NJT8319UF					F-type			Input Port: IF Connector	
NJT8319UNNM					N-type			DC Power	
NJT8319UFM					F-type			Input Port: MS or IF Connector	
NJT8319UNMA					N-type	FSK Communications M&C *Note1	Enclosed *Note6 Outdoor AC/DC PSU	DC Power	
NJT8319UFMA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319UNK					N-type			DC Power	
NJT8319UFK					F-type			Input Port: IF Connector	
NJT8319UNMK					N-type	RS-232C Interface M&C *Note2	Enclosed *Note6 Outdoor AC/DC PSU	DC Power	
NJT8319UFMK					F-type			Input Port: MS or IF Connector	
NJT8319UNMKA					N-type			DC Power	
NJT8319UFMKA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319UNMR					N-type	FSK Communications M&C *Note1	Enclosed *Note6 Outdoor AC/DC PSU	DC Power	
NJT8319UFMR					F-type			Input Port: MS or IF Connector	
NJT8319UNMRA					N-type			DC Power	
NJT8319UFMRA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319N	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		N-type	NA	NA	DC Power	
NJT8319F					F-type			Input Port: IF Connector	
NJT8319NM					N-type			DC Power	
NJT8319FM					F-type			Input Port: MS or IF Connector	
NJT8319NMA					N-type	FSK Communications M&C *Note1	Enclosed *Note6 Outdoor AC/DC PSU	DC Power	
NJT8319FMA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319NK					N-type			DC Power	
NJT8319FK					F-type			Input Port: IF Connector	
NJT8319NMK					N-type	RS-232C Interface M&C *Note2	Enclosed *Note6 Outdoor AC/DC PSU	DC Power	
NJT8319FMK					F-type			Input Port: MS or IF Connector	
NJT8319NMKA					N-type			DC Power	
NJT8319FMKA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319NMR					N-type	FSK Communications M&C *Note1	Enclosed *Note6 Outdoor AC/DC PSU	DC Power	
NJT8319FMR					F-type			Input Port: MS or IF Connector	
NJT8319NMRA					N-type			DC Power	
NJT8319FMRA					F-type			Supplied by Outdoor 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".

*Note6: The detail is shown in section of "OUTDOOR 250W AC/DC PSU".



Standard Ku 16W: NJT8319 series
Universal Ku 16W: NJT8319U series

Specifications

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.	+42 dBm min. over temperature
Conversion Gain	68 dB nom., 62 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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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	+36 to +60 VDC at BUC Input Port 90 to 264 VAC at Outdoor AC/DC PSU: (AC Power Option) NJT8319NMA / 19FMA / 19NMKA / 19FMKA / 19NMRA / 19FMRA / 19UNMA / 19UFMA / 19UNMKA / 19UFMKA / 19UNMRA / 19UFMRA
Power Consumption	160 W typ., 180 W max.
Port for Voltage Input	Same as IF Connector : NJT8319N / 19F / 19NK / 19FK / 19UN / 19UF / 19UNK / 19UFK MS Connector : NJT8319NM / 19FM / 19NMK / 19FMK / 19NMR / 19FMR / 19UNM / 19UFM / 19UNMK / 19UFMK / 19UNMR / 19UFMR MS Connector supplied by Outdoor AC/DC PSU : NJT8319NMA / 19FMA / 19NMKA / 19FMKA / 19NMRA / 19FMRA / 19UNMA / 19UFMA / 19UNMKA / 19UFMKA / 19UNMRA / 19UFMRA
Temperature Range (ambient)	Operating : (Operation Guarantee) -40 to +75 °C (Performance Guarantee) -40 to +55 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Cooling	Forced-air-cooling by FAN
Dimension (without Interface Connector)	(L) 180 × (W) 130 × (H) 80 mm [(L) 7.09" × (W) 5.12" × (H) 3.15"]
Weight	2.4 kg [5.3 lbs]

*Note7: MS Connector models are available to apply DC voltage via either MS Connector or IF Connector.
DO NOT apply DC voltage via both MS Connector and IF Connector. If DC voltage is applied on both connectors, it may damage the unit or the unit may not operate properly.





Ku-band BUC

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8W MINI-BUC : NJT8318 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	M&C Function	AC Power Option	Power Supply	LED Indicator
NJT8318UN	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+39 dBm min. (8W)	N-type	NA	NA	DC Power	Equipped
NJT8318UF					F-type			Input Port: IF Connector	
NJT8318UNM					N-type			DC Power	
NJT8318UFM					F-type			Input Port: MS or IF Connector	
NJT8318UNA					N-type	Enclosed *Note8 Indoor AC/DC PSU	NA	DC Power	
NJT8318UFA					F-type			Supplied by Indoor AC/DC PSU	
NJT8318UNK					N-type			DC Power	
NJT8318UFK					F-type			Input Port: IF Connector	
NJT8318UNMK					N-type	FSK Communications M&C *Note1	NA	DC Power	
NJT8318UFMK					F-type			Input Port: MS or IF Connector	
NJT8318UNMR					N-type			DC Power	
NJT8318UFMR					F-type			Input Port: MS or IF Connector	
NJT8318UNMRA					N-type	RS-232C Interface M&C *Note2	Enclosed *Note8 Indoor AC/DC PSU	DC Power	
NJT8318UFMRA					F-type			Supplied by Indoor AC/DC PSU	
NJT8318N	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		N-type	NA	NA	DC Power	
NJT8318F					F-type			Input Port: IF Connector	
NJT8318NM					N-type			DC Power	
NJT8318FM					F-type			Input Port: MS or IF Connector	
NJT8318NA					N-type	Enclosed *Note8 Indoor AC/DC PSU	NA	DC Power	
NJT8318FA					F-type			Supplied by Indoor AC/DC PSU	
NJT8318NK					N-type			DC Power	
NJT8318FK					F-type			Input Port: IF Connector	
NJT8318NMK					N-type	FSK Communications M&C *Note1	NA	DC Power	
NJT8318FMK					F-type			Input Port: MS or IF Connector	
NJT8318NMR					N-type			DC Power	
NJT8318FMR					F-type			Input Port: MS or IF Connector	
NJT8318NMRA					N-type	RS-232C Interface M&C *Note2	Enclosed *Note8 Indoor AC/DC PSU	DC Power	
NJT8318FMRA					F-type			Supplied by Indoor 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".

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



Standard Ku 8W: NJT8318 series

Universal Ku 8W: NJT8318U series

Specifications

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.	+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) 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)	-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 90 to 264 VAC at Indoor AC/DC PSU: (AC Power Option) NJT8318NA / 18FA / 18NMRA / 18FMRA / 18UNA / 18UFA / 18UNMRA / 18UFMRA
Power Consumption	80 W typ., 90 W max.
Port for Voltage Input	Same as IF Connector : NJT8318NA / 18FA / 18NMRA / 18FMRA / 18UNA / 18UFA / 18UNMRA / 18UFMRA
*Note9	MS Connector : NJT8318NM / 18FM / 18NMK / 18FMK / 18NMR / 18FMR / 18UNM / 18UFM / 18UNMK / 18UFMK / 18UNMR / 18UFMR IF Connector supplied by Indoor AC/DC PSU through IF Cable : NJT8318NA / 18FA / 18NMRA / 18FMRA / 18UNA / 18UFA / 18UNMRA / 18UFMRA
Temperature Range (ambient)	Operating : (Operation Guarantee) -40 to +75 °C (Performance Guarantee) -40 to +55 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Cooling	Forced-air-cooling by FAN
Dimension (without Interface Connector)	(L) 180 x (W) 130 x (H) 80 mm [(L) 7.09" x (W) 5.12" x (H) 3.15"]
Weight	2.4 kg [5.3 lbs]

*Note9: MS Connector models are available to apply DC voltage via either MS Connector or IF Connector.
DO NOT apply DC voltage via both MS Connector and IF Connector. If DC voltage is applied on both connectors, it may damage the unit or the unit may not operate properly.





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8W BUC : NJT5118 & NJT5218 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	AC Power Option	Power Supply	LED Indicator
NJT5218N	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+39 dBm min. (8W)	N-type	NA	DC Power	Equipped
NJT5218F					F-type		Input Port: IF Connector	
NJT5218NM					N-type		DC Power	
NJT5218FM					F-type		Input Port: MS Connector	
NJT5218NA					N-type		DC Power	
NJT5218FA					F-type	Enclosed *Note8 Indoor AC/DC PSU	Supplied by Indoor AC/DC PSU	
NJT5118N	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		N-type	NA	DC Power	
NJT5118F					F-type		Input Port: IF Connector	
NJT5118NM					N-type		DC Power	
NJT5118FM					F-type		Input Port: MS Connector	
NJT5118NA					N-type		DC Power	
NJT5118FA					F-type	Enclosed *Note8 Indoor AC/DC PSU	Supplied by Indoor AC/DC PSU	

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

UNIVERSAL KU-BAND



Standard Ku 8W: NJT5118 series

Universal Ku 8W: NJT5218 series

Specifications

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.	+39 dBm min. over temperature
Conversion Gain	59 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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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 90 to 264 VAC at Indoor AC/DC PSU: (AC Power Option) NJT5118NA / 18FA, NJT5218NA / 18FA
Power Consumption	79 W typ., 90 W max. : (Standard Ku-band) NJT5118 series 79 W typ., 93 W max. : (Universal Ku-band) NJT5218 series
Port for Voltage Input	Same as IF Connector : NJT5118N / 18F, NJT5218N / 18F MS Connector : NJT5118NM / 18FM, NJT5218NM / 18FM IF Connector supplied by Indoor AC/DC PSU through IF Cable : NJT5118NA / 18FA, NJT5218NA / 18FA
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Dimension (without Interface Connector)	(L) 219.5 x (W) 175 x (H) 99 mm [(L) 8.64" x (W) 6.89" x (H) 3.90"]
Weight	3.2 kg [7.0 lbs]

■ 6W BUC : NJT8306 series

UNIVERSAL KU-BAND



Standard Ku 6W: NJT8306 series
Universal Ku 6W: NJT8306U series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator	
NJT8306UN	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+37.8 dBm min. (6W)	N-type	Equipped	
NJT8306UF					F-type		
NJT8306N	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		N-type		
NJT8306F					F-type		

■ Specifications

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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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.
Power Requirement	+12 to +30 VDC
Power Consumption	40 W typ., 48 W max.
Temperature Range (ambient)	Operating : (Operation Guarantee) -40 to +65 °C (Performance Guarantee) -40 to +60 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Dimension	(L) 174.9 x (W) 84 x (H) 59.2 mm
(without Interface Connector)	[(L) 6.89" x (W) 3.31" x (H) 2.33"]
Weight	1.2 kg [2.6 lbs]

■ 4W BUC : NJT5207, NJT5307 & NJT8304 series

UNIVERSAL KU-BAND



NEW Standard Ku 4W: NJT8304 series
NEW Universal Ku 4W: NJT8304U series

	Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NEW	NJT8304UN	13.75 to 14.50 GHz (Universal Ku-band)	12.80 GHz	950 to 1,700 MHz	+36 dBm min. (4W)	N-type	NA
	NJT8304UF					F-type	Equipped
	NJT5207N					N-type	
	NJT5207F					F-type	
NEW	NJT8304N	14.00 to 14.50 GHz (Standard Ku-band)	13.05 GHz	950 to 1,450 MHz		N-type	NA
	NJT8304F					F-type	Equipped
	NJT5307N					N-type	
	NJT5307F					F-type	

■ Specifications

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.	+36.0 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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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	+12 to +30 VDC : NJT8304 series +15 to +30 VDC : NJT5207 / NJT5307 series
Power Consumption	28 W typ., 32 W max. : NJT8304 series 37 W max. : NJT5207 / NJT5307 series
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +75 °C : NJT8304 series Operating : -40 to +55 °C Storage : -40 to +75 °C : NJT5207 / NJT5307 series
Waterproof / Dustproof (IP Code)	IP 67
Dimension	(L) 98 x (W) 98 x (H) 42.5 mm [(L) 3.86" x (W) 3.86" x (H) 1.65"] : NJT8304 series
(without Interface Connector)	(L) 175.9 x (W) 143 x (H) 56.5 mm [(L) 6.93" x (W) 5.63" x (H) 2.22"] : NJT5207 / NJT5307 series
Weight	500 g [1.1 lbs] : NJT8304 series 1.7 kg [3.7 lbs] : NJT5207 / NJT5307 series

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Standard Ku 4W: NJT5307 series
Universal Ku 4W: NJT5207 series



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3W / 1.5W BUC : NJT8301 & NJT8302 series

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Standard Ku 3W: NJT8302 series
Universal Ku 3W: NJT8302U series
Standard Ku 1.5W: NJT8301 series
Universal Ku 1.5W: NJT8301U series

3W BUC: NJT8302 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT8302UN	13.75 to 14.50 GHz	12.80 GHz	950 to 1,700 MHz	+34 dBm min. (3W)	N-type	NA
NJT8302UF	(Universal Ku-band)				F-type	
NJT8302N	14.00 to 14.50 GHz	13.05 GHz	950 to 1,450 MHz		N-type	
NJT8302F	(Standard Ku-band)				F-type	

1.5W BUC: NJT8301 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT8301UN	13.75 to 14.50 GHz	12.80 GHz	950 to 1,700 MHz	+31 dBm min. (1.5W)	N-type	NA
NJT8301UF	(Universal Ku-band)				F-type	
NJT8301N	14.00 to 14.50 GHz	13.05 GHz	950 to 1,450 MHz		N-type	
NJT8301F	(Standard Ku-band)				F-type	

Specifications

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.	+34.0 dBm min. over temperature : (3W) NJT8302 series +31.0 dBm min. over temperature : (1.5W) NJT8301 series
Conversion Gain	58 dB typ., 51 dB min. : (3W) NJT8302 series 55 dB typ., 48 dB min. : (1.5W) NJT8301 series
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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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	+12 to +30 VDC
Power Consumption	18 W typ., 23 W max. : (3W) NJT8302 series 12 W typ., 14 W max. : (1.5W) NJT8301 series
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Dimension (without Interface Connector)	(L) 91.55 x (W) 68 x (H) 42.5 mm [(L) 3.6" x (W) 2.68" x (H) 1.67"]
Weight	350 g [0.77 lbs]

Model Numbering System

N J T 8 3 0 6 U N

IF Interface Connector - N: N-type (50 ohms), Female Connector
F: F-type (75 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)

Output Power - 06: +37.8 dBm (6W) @ 1dB G.C.P.
04: +36.0 dBm (4W) @ 1dB G.C.P.
02: +34.0 dBm (3W) @ 1dB G.C.P.
01: +31.0 dBm (1.5W) @ 1dB G.C.P.

Product Series Model Number



Ku-band LNB

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Switchable 2LO PLL LNB [Internal & External Reference Type] : NJR2841, NJR2842 & NJR2843 series

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Universal Ku 2LO PLL (Int. & Ext.):
NJR2841 series
NJR2842 series
NJR2843 series

Internal Reference Type

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Frequency Selected by *Note9	Local Stability [-40 to +60 °C]	IF Connector
NJR2841L	Low Band: 10.70 to 11.70 GHz High Band: 11.70 to 12.75 GHz (Universal Ku-band)	Low Band: 9.75 GHz High Band: 10.60 GHz	Low Band: 950 to 1,950 MHz High Band: 1,100 to 2,150 MHz	Mechanical Switch	+/- 50 ppm	F-type
NJR2841LN					(+/- 500 kHz typ.)	N-type
NJR2841H					+/- 10 ppm	F-type
NJR2841HN					(+/- 100 kHz typ.)	N-type
NJR2841S					+/- 3 ppm	F-type
NJR2841SN					(+/- 30 kHz typ.)	N-type
NJR2842L					+/- 50 ppm	F-type
NJR2842LN					(+/- 500 kHz typ.)	N-type
NJR2842H				+/- 10 ppm	F-type	
NJR2842HN				(+/- 100 kHz typ.)	N-type	
NJR2842S				+/- 3 ppm	F-type	
NJR2842SN				(+/- 30 kHz typ.)	N-type	
NJR2843L				Input Voltage	+/- 50 ppm	F-type
NJR2843LN					(+/- 500 kHz typ.)	N-type
NJR2843H	+/- 10 ppm	F-type				
NJR2843HN	(+/- 100 kHz typ.)	N-type				
NJR2843S	+/- 3 ppm	F-type				
NJR2843SN	(+/- 30 kHz typ.)	N-type				

External Reference Type

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Frequency Selected by *Note9	Local Stability [-40 to +60 °C]	IF Connector
NJR2841E	Low Band: 10.70 to 11.70 GHz	Low Band: 9.75 GHz	Low Band: 950 to 1,950 MHz	Mechanical Switch	Depends on External Reference	F-type
NJR2841EN						N-type
NJR2842E	High Band: 11.70 to 12.75 GHz (Universal Ku-band)	High Band: 10.60 GHz	High Band: 1,100 to 2,150 MHz	22kHz Tone		F-type
NJR2842EN						N-type
NJR2843E				Input Voltage		F-type
NJR2843EN						N-type

*Note9: The detail is shown in section of "LOCAL FREQUENCY SELECTION".

Specifications

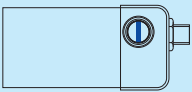
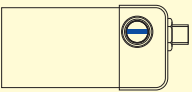
Item	Specifications
Input Interface	Waveguide, WR 75 with Groove
Output Interface	Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
Noise Figure (at +25 °C)	0.8 dB
Conversion Gain (at +25 °C)	62 dB max., 48 dB min.
Requirement External Reference Signal (Only External Reference Type is 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) : -70 dBc/Hz @1kHz -75 dBc/Hz @10kHz -85 dBc/Hz @100kHz (External Reference Type) : -70 dBc/Hz @1kHz -75 dBc/Hz @10kHz -85 dBc/Hz @100kHz * Depends on Phase Noise of External Reference
Power Requirement	+10 to +24 VDC
Operating Current	170 mA : (Internal Reference Type) 200 mA : (External Reference Type)
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +80 °C
Waterproof / Dustproof (IP Code)	IP 67
Dimension	(L) 83.2 x (W) 42 x (H) 42 mm [(L) 3.28" x (W) 1.65" x (H) 1.65"] : NJR2841 series
(without Interface Connector & Mechanical Switch)	(L) 83.2 x (W) 40 x (H) 40 mm [(L) 3.28" x (W) 1.57" x (H) 1.57"] : NJR2842 / NJR2843 series
Weight	210 g [0.46 lbs] : (F-type IF Connector) / 240 g [0.53 lbs] : (N-type IF Connector)

LOCAL FREQUENCY SELECTION

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

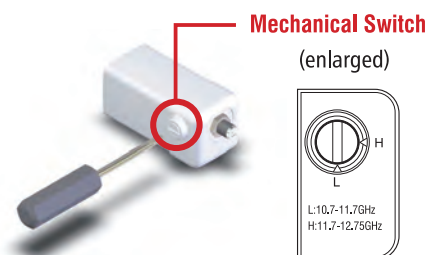
- Mechanical Switch
- 22kHz Tone On/Off
- Input Voltage High/Low

Specification of Local Switch

	RF Frequency	
	Low Band (10.7 to 11.7 GHz)	High Band (11.7 to 12.75 GHz)
Mechanical Switch	Initial Set 	
22kHz Tone On/Off	Tone Level: 0 to 0.2 Vp-p	Tone Level: 0.4 to 0.8 Vp-p
Input Voltage High/Low	Voltage: +10 to +14 VDC	Voltage: +15.5 to +24 VDC

Applicable Models: NJR2841, NJR2842 and NJR2843 series

Image of Mechanical Switch





Ku-band LNB

V SAT
PRODUCTS

2016-2017

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



Ku PLL (Int): NJR2835 series
Ku PLL (Ext): NJR2935E series

Internal Reference Type: NJR2835 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-40 to +60 °C]	IF Connector
NJR2837H	10.95 to 11.70 GHz	10.00 GHz	950 to 1,700 MHz	+/- 10 ppm	F-type
NJR2837HN				(+/- 100 kHz typ.)	N-type
NJR2837S				+/- 3 ppm	F-type
NJR2837SN				(+/- 30 kHz typ.)	N-type
NJR2837U				+/- 1 ppm	F-type
NJR2837UN				(+/- 10 kHz typ.)	N-type
NJR2839H	11.20 to 11.70 GHz	10.25 GHz	950 to 1,450 MHz	+/- 10 ppm	F-type
NJR2839HN				(+/- 100 kHz typ.)	N-type
NJR2839S				+/- 3 ppm	F-type
NJR2839SN				(+/- 30 kHz typ.)	N-type
NJR2839U				+/- 1 ppm	F-type
NJR2839UN				(+/- 10 kHz typ.)	N-type
NJR2835H	11.70 to 12.20 GHz	10.75 GHz	950 to 1,450 MHz	+/- 10 ppm	F-type
NJR2835HN				(+/- 100 kHz typ.)	N-type
NJR2835S				+/- 3 ppm	F-type
NJR2835SN				(+/- 30 kHz typ.)	N-type
NJR2835U				+/- 1 ppm	F-type
NJR2835UN				(+/- 10 kHz typ.)	N-type
NJR2836H	12.25 to 12.75 GHz	11.30 GHz	950 to 1,450 MHz	+/- 10 ppm	F-type
NJR2836HN				(+/- 100 kHz typ.)	N-type
NJR2836S				+/- 3 ppm	F-type
NJR2836SN				(+/- 30 kHz typ.)	N-type
NJR2836U				+/- 1 ppm	F-type
NJR2836UN				(+/- 10 kHz typ.)	N-type

External Reference Type: NJR2935E series

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-40 to +60 °C]	IF Connector
NJR2937E	10.95 to 11.70 GHz	10.00 GHz	950 to 1,700 MHz	Depends on External Reference	F-type
NJR2937EN					N-type
NJR2939E	11.20 to 11.70 GHz	10.25 GHz	950 to 1,450 MHz		F-type
NJR2939EN					N-type
NJR2935E	11.70 to 12.20 GHz	10.75 GHz	950 to 1,450 MHz		F-type
NJR2935EN					N-type
NJR2934E	12.20 to 12.75 GHz	11.25 GHz	950 to 1,500 MHz		F-type
NJR2934EN					N-type
NJR2936E	12.25 to 12.75 GHz	11.30 GHz	950 to 1,450 MHz		F-type
NJR2936EN					N-type

Specifications

Item	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 (SSB)	Phase Noise: -135 dBc/Hz @100Hz -143 dBc/Hz @1kHz -145 dBc/Hz @10kHz (Internal Reference Type) NJR2835 series : -70 dBc/Hz @100Hz -80 dBc/Hz @1kHz (External Reference Type) NJR2935E series : -75 dBc/Hz @100Hz -80 dBc/Hz @1kHz -85 dBc/Hz @10kHz * Depends on Phase Noise of External Reference
Power Requirement	+12 to +24 VDC
Operating Current	200 mA
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]

DRO LNB : NJR2744 series



Ku DRO: NJR2744 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-40 to +60 °C]	IF Connector
NJR2784H	10.95 to 11.70 GHz	10.00 GHz	950 to 1,700 MHz	+/- 900 kHz	F-type
NJR2744H	11.70 to 12.20 GHz	10.75 GHz	950 to 1,450 MHz		F-type
NJR2754H	12.25 to 12.75 GHz	11.30 GHz	950 to 1,450 MHz		F-type

Specifications

Item	Specifications
Input Interface	Waveguide, WR 75 with Groove
Output Interface	Coax. Connector, F-type female (75 ohm)
Noise Figure (at +25 °C)	0.8 dB
Conversion Gain (at +25 °C)	55 dB
Phase Noise (SSB)	-65 dBc/Hz @1kHz -90 dBc/Hz @10kHz -110 dBc/Hz @100kHz
Power Requirement	+12 to +24 VDC
Operating Current	110 mA
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +80 °C
Waterproof / Dustproof (IP Code)	IP 67
Dimension (without Interface Connector)	(L) 82.2 x (W) 40 x (H) 40 mm [(L) 3.24" x (W) 1.57" x (H) 1.57"]
Weight	210 g [0.46 lbs]



C-band BUC

VSAT
PRODUCTS

2016-2017

10W / 8W BUC : NJT5760 & NJT5762 series

10W BUC: NJT5762, NJT5763 & NJT5764 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	AC Power Option	Power Supply	M&C Function	LED Indicator
NJT5763N	5.850 to 6.725 GHz (Full C-band)	4.90 GHz	950 to 1,825 MHz	+40 dBm min. (10W)	N-type	NA	DC Power	NA	Equipped
NJT5763F					F-type		Input Port: IF Connector		
NJT5763NM					N-type		DC Power		
NJT5763FM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	FSK Communications M&C *Note1	NA
NJT5763NA					N-type		DC Power		
NJT5763FA					F-type		Supplied by Indoor AC/DC PSU		
NJT5763KN					N-type	NA	DC Power	FSK Communications M&C *Note1	NA
NJT5763KF					F-type		Input Port: IF Connector		
NJT5763KNM					N-type		DC Power		
NJT5763KFM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	NA	NA
NJT5762N	5.850 to 6.425 GHz (Standard C-band)		950 to 1,525 MHz		N-type		DC Power	FSK Communications M&C *Note1	NA
NJT5762F					F-type		Input Port: IF Connector		
NJT5762NM					N-type		DC Power		
NJT5762FM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	NA	NA
NJT5762NA					N-type		DC Power		
NJT5762FA					F-type		Supplied by Indoor AC/DC PSU		
NJT5762KN					N-type	NA	DC Power	FSK Communications M&C *Note1	NA
NJT5762KF					F-type		Input Port: IF Connector		
NJT5762KNM					N-type		DC Power		
NJT5762KFM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	NA	NA
NJT5764N	6.725 to 7.025 GHz (Insat C-band)	5.76 GHz	965 to 1,265 MHz		N-type		DC Power	FSK Communications M&C *Note1	NA
NJT5764F					F-type		Input Port: IF Connector		
NJT5764NM					N-type		DC Power		
NJT5764FM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	NA	NA
NJT5764NA					N-type		DC Power		
NJT5764FA					F-type		Supplied by Indoor AC/DC PSU		
NJT5764KN					N-type	NA	DC Power	FSK Communications M&C *Note1	NA
NJT5764KF					F-type		Input Port: IF Connector		
NJT5764KNM					N-type		DC Power		
NJT5764KFM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	NA	NA

8W BUC: NJT5760 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	AC Power Option	Power Supply	M&C Function	LED Indicator
NJT5760N	5.850 to 6.425 GHz (Standard C-band)	4.90 GHz	950 to 1,525 MHz	+39 dBm min. (8W)	N-type	NA	DC Power	NA	Equipped
NJT5760F					F-type		Input Port: IF Connector		
NJT5760NM					N-type		DC Power		
NJT5760FM					F-type	Enclosed *Note8 Indoor AC/DC PSU	Input Port: MS Connector	NA	NA
NJT5760NA					N-type		DC Power		
NJT5760FA					F-type		Supplied by Indoor AC/DC PSU		

*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".



Standard C 10W: NJT5762 series

Full C 10W: NJT5763 series

Insat C 10W: NJT5764 series

Standard C 8W: NJT5760 series

Specifications

Item	Specifications
Output Interface	Waveguide, CPR 137 with Groove
Input Interface	Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
Output Power @ 1 dB G.C.P.	+40 dBm min. over temperature : (10W) NJT5762 / NJT5763 / NJT5764 series +39 dBm min. over temperature : (8W) NJT5760 series
Conversion Gain	64 dB nom., 58 dB min. : (10W) NJT5762 / NJT5763 / NJT5764 series 63 dB nom., 57 dB min. : (8W) NJT5760 series
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: -125 dBc/Hz @100Hz -135 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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 90 to 264 VAC at Indoor AC/DC PSU: (AC Power Option) NJT5760NA / 60FA / 62NA / 62FA / 63NA / 63FA / 64NA / 64FA
Power Consumption	69 W typ., 75 W max. : (10W / Standard C-band) NJT5762 series 75 W typ., 85 W max. : (10W / Full C-band) NJT5763 series 73 W typ., 80 W max. : (10W / Insat C-band) NJT5764 series 63 W typ., 70W max. : (8W / Standard C-band) NJT5760 series
Port for Voltage Input	Same as IF Connector : NJT5760N/60F/62N/62F/62KN/62KF/63N/63F/63KN/63KF/64N/64F/64KN/64KF MS Connector : NJT5760NM/60FM/62NM/62FM/62KNM/62KFM/63NM/63FM/63KNM/63KFM/64NM/64FM/64KNM/64KFM IF Connector supplied by Indoor AC/DC PSU through IF Cable : NJT5760NA / 60FA / 62NA / 62FA / 63NA / 63FA / 64NA / 64FA
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
Waterproof / Dustproof (IP Code)	IP 67
Dimension (without Interface Connector)	(L) 219.5 x (W) 175 x (H) 99 mm [(L) 8.64" x (W) 6.89" x (H) 3.90"]
Weight	3.2 kg [7.0 lbs]



C-band BUC

V SAT
PRODUCTS | **2016-2017**

5W BUC : NJT5669 series

FULL C-BAND



Standard C 5W: NJT5669 series

Full C 5W: NJT5677 series

Palapa C 5W: NJT5675 series

Insat C 5W: NJT5670 series

5W BUC: NJT5669, NJT5670, NJT5675 & NJT5677 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT5677N	5.850 to 6.725 GHz (Full C-band)	4.90 GHz	950 to 1,825 MHz	+37 dBm min. (5W)	N-type	Equipped
NJT5677F					F-type	
NJT5669	5.850 to 6.425 GHz (Standard C-band)		950 to 1,525 MHz		N-type	
NJT5669F					F-type	
NJT5675N	6.365 to 6.725 GHz (Palapa C-band)	5.30 GHz	1,065 to 1,425 MHz		N-type	
NJT5675F					F-type	
NJT5670	6.725 to 7.025 GHz (Insat C-band)	5.76 GHz	965 to 1,265 MHz		N-type	
NJT5670F					F-type	

3W / 2W BUC : NJT5667, NJT5679, NJT8102 & NJT8103 series

FULL C-BAND



NEW Full C 3W: NJT8103W series

NEW Standard C 3W: NJT8103 series

NEW Full C 2W: NJT8102W series

NEW Standard C 2W: NJT8102 series

3W BUC: NJT5679 & NJT8103 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT8103WN	5.850 to 6.725 GHz (Full C-band)	4.90 GHz	950 to 1,825 MHz	+34.5 dBm min. (3W)	N-type	N/A
NJT8103WF					F-type	
NJT8103N	5.850 to 6.425 GHz (Standard C-band)		950 to 1,525 MHz		N-type	
NJT8103F					F-type	
NJT5679N	5.850 to 6.725 GHz (Full C-band)		950 to 1,825 MHz	+34 dBm min. (3W)	N-type	Equipped
NJT5679F					F-type	

2W BUC: NJT5667, NJT5668, NJT5674 & NJT8102 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT8102WN	5.850 to 6.725 GHz (Full C-band)	4.90 GHz	950 to 1,825 MHz	+33 dBm min. (2W)	N-type	N/A
NJT8102WF					F-type	
NJT8102N	5.850 to 6.425 GHz (Standard C-band)		950 to 1,525 MHz		N-type	
NJT8102F					F-type	
NJT5667					N-type	Equipped
NJT5667F					F-type	
NJT5674N	6.365 to 6.725 GHz (Palapa C-band)	5.30 GHz	1,065 to 1,425 MHz		N-type	
NJT5674F					F-type	
NJT5668	6.725 to 7.025 GHz (Insat C-band)	5.76 GHz	965 to 1,265 MHz		N-type	
NJT5668F					F-type	

Specifications

Item	Specifications
Output Interface	Waveguide, CPR 137 with Groove
Input Interface	Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
Output Power @ 1 dB G.C.P.	+37.0 dBm min. over temperature : (5W) NJT5669 / NJT5670 / NJT5675 / NJT5677 series +34.5 dBm min. over temperature : (3W) NJT8103 series +34.0 dBm min. over temperature : (3W) NJT5679 series +33.0 dBm min. over temperature : (2W) NJT5667 / NJT5668 / NJT5674 / NJT8102 series
Conversion Gain	61 dB nom. : (5W) NJT5669 / NJT5670 / NJT5675 / NJT5677 series 59 dB nom., 53 dB min. : (3W) NJT8103 series 58 dB nom. : (3W) NJT5679 series 58 dB nom., 52 dB min. : (2W) NJT8102 series 58 dB nom. : (2W) NJT5667 / NJT5668 / NJT5674 series
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: -120 dBc/Hz @100Hz -130 dBc/Hz @1kHz -140 dBc/Hz @10kHz
Phase Noise (SSB)	-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	+12 to +30 VDC : NJT8103 / NJT8102 series +15 to +30 VDC : NJT5667 / NJT5668 / NJT5669 / NJT5670 / NJT5674 / NJT5675 / NJT5677 / NJT5679 series
Power Consumption	48 W max. : (5W) NJT5669 / NJT5670 / NJT5675 / NJT5677 series 21 W typ., 25 W max. : (3W) NJT8103 series 30 W typ., 35 W max. : (3W) NJT5679 series 18 W typ., 22 W max. : (2W) NJT8102 series 33 W max. : (2W / Palapa C-band , Insat C-band) NJT5668 / NJT5674 series UPDATED 19 W typ., 22 W max. : (2W / Standard C-band) NJT5667 series
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +75 °C : NJT8103 / NJT8102 series Operating : -40 to +55 °C Storage : -40 to +75 °C : NJT5667 / 68 / 69 / 70 / 74 / 75 / 77 / 79 series
Waterproof / Dustproof (IP Code)	IP 67
Dimension (without Interface Connector)	(L) 135.4 x (W) 85 x (H) 56 mm [(L) 5.31" x (W) 3.35" x (H) 2.20"] : NJT8103 / NJT8102 series (L) 190.6 x (W) 160 x (H) 59 mm [(L) 7.50" x (W) 6.30" x (H) 2.32"] : NJT5667 / 68 / 69 / 70 / 74 / 75 / 77 / 79 series
Weight	800 g [1.8 lbs] : NJT8103 / NJT8102 series 1.9 kg [4.2 lbs] : NJT5667 / NJT5668 / NJT5669 / NJT5670 / NJT5674 / NJT5675 / NJT5677 / NJT5679 series

FULL C-BAND



Full C 3W: NJT5679 series

Standard C 2W: NJT5667 series

Palapa C 2W: NJT5674 series

Insat C 2W: NJT5678 series

■ PLL LNB [Internal & External Reference Type] : NJS8486 & NJS8486E series



C PLL (Int): NJS8486 series
C PLL (Ext): NJS8486E series

● Internal Reference Type: NJS8486 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-40 to +60 °C]	IF Connector
NJS8486H	3.400 to 4.200 GHz (Palapa C-band)	5.15 GHz	950 to 1,750 MHz	+/- 10 ppm	F-type
NJS8486HN				(+/- 50 kHz typ.)	N-type
NJS8486S				+/- 3 ppm	F-type
NJS8486SN				(+/- 15 kHz typ.)	N-type
NJS8486U				+/- 1 ppm	F-type
NJS8486UN	3.625 to 4.200 GHz (Standard C-band)	5.15 GHz	950 to 1,525 MHz	(+/- 5 kHz typ.)	N-type
NJS8487H				+/- 10 ppm	F-type
NJS8487HN				(+/- 50 kHz typ.)	N-type
NJS8487S				+/- 3 ppm	F-type
NJS8487SN				(+/- 15 kHz typ.)	N-type
NJS8487U	4.500 to 4.800 GHz (Insat C-band)	5.76 GHz	960 to 1,260 MHz	+/- 1 ppm	F-type
NJS8487UN				(+/- 5 kHz typ.)	N-type
NJS8488H				+/- 10 ppm	F-type
NJS8488HN				(+/- 50 kHz typ.)	N-type
NJS8488S				+/- 3 ppm	F-type
NJS8488SN				(+/- 15 kHz typ.)	N-type
NJS8488U				+/- 1 ppm	F-type
NJS8488UN				(+/- 5 kHz typ.)	N-type

● External Reference Type: NJS8486E series

Model No.	RF Frequency	Local Frequency	IF Frequency	Local Stability [-40 to +60 °C]	IF Connector
NJS8486E	3.400 to 4.200 GHz (Palapa C-band)	5.15 GHz	950 to 1,750 MHz	Depend on External Reference	F-type
NJS8486EN					N-type
NJS8487E	3.625 to 4.200 GHz (Standard C-band)	5.15 GHz	950 to 1,525 MHz		F-type
NJS8487EN					N-type
NJS8488E	4.500 to 4.800 GHz (Insat C-band)	5.76 GHz	960 to 1,260 MHz		F-type
NJS8488EN					N-type

■ Specifications

Item	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 dB min.
Requirement External Reference Signal (Only NJS8486E series is 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) NJS8486 series -70 dBc/Hz @100Hz -80 dBc/Hz @1kHz -85 dBc/Hz @10kHz -90 dBc/Hz @ 100 kHz (External Reference Type) NJS8486E series -70 dBc/Hz @100Hz -80 dBc/Hz @1kHz -85 dBc/Hz @10kHz -90 dBc/Hz @ 100 kHz * Depends on Phase Noise of External Reference
Power Requirement	+12 to +24 VDC
Operating Current	350 mA : (Internal Reference type) NJS8486 series 400 mA : (External 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]

■ LNA : NJS8451 & NJS8452



LNA: NJS8451 & NJS8452

Model No.	RF Frequency
NJS8452	3.400 to 4.200 GHz (Palapa C-band)
NJS8451	4.500 to 4.800 GHz (Insat C-band)

■ Specifications

Item	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]

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

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

DO NOT open the cover. Although the unit is completely waterproof, if the cover is opened, the warranty will become invalid.



Product Label

DO NOT remove the label. This is for our QA traceability



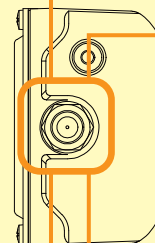
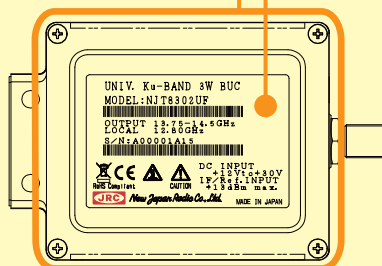
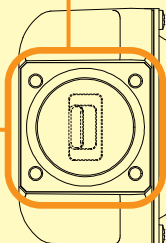
Connector

Connect the IF cable with 0.68 to 1.13 N·m torques.



WG Filter

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.



Input Voltage

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

DO NOT supply IF signal over the maximum level indicated on product label of +10 or +13 dBm.



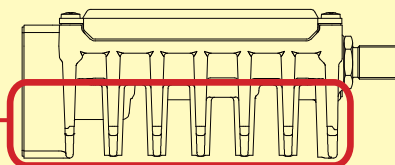
10MHz Reference

Supply 10MHz reference signal within the range of -5 to +5 dBm.



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.



LNBS Instructions:



Sealing Film

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

DO NOT open the cover. Although the unit is completely waterproof, if the cover is opened, the warranty will become invalid.



Product Label

DO NOT remove the label. This is for our QA traceability



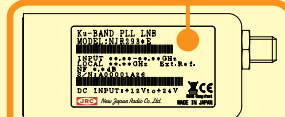
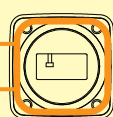
Connector

Connect the IF cable with 0.68 to 1.13 N·m torques.



Input RF Level

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



Input Voltage

Apply DC voltage within the range indicated on product label. LNBS are operated at the input voltage of +10 to +24VDC, +12 to +24VDC, or +12 to +28VDC.

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.



LED INDICATOR

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

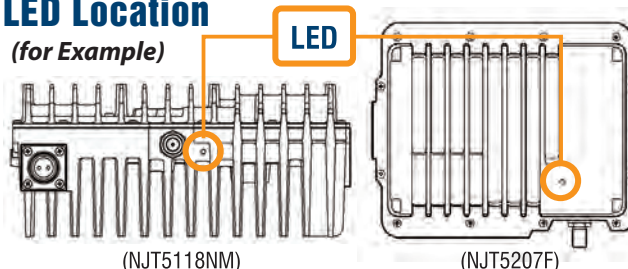
Status Chart

DC Power	OFF	ON	ON
10 MHz Reference Signal	OFF	OFF or LO unlocked	ON "Normal"

Applicable Models: All models of BUC except NJT8301/02, NJT8304, and NJT8102/03 series

LED Location

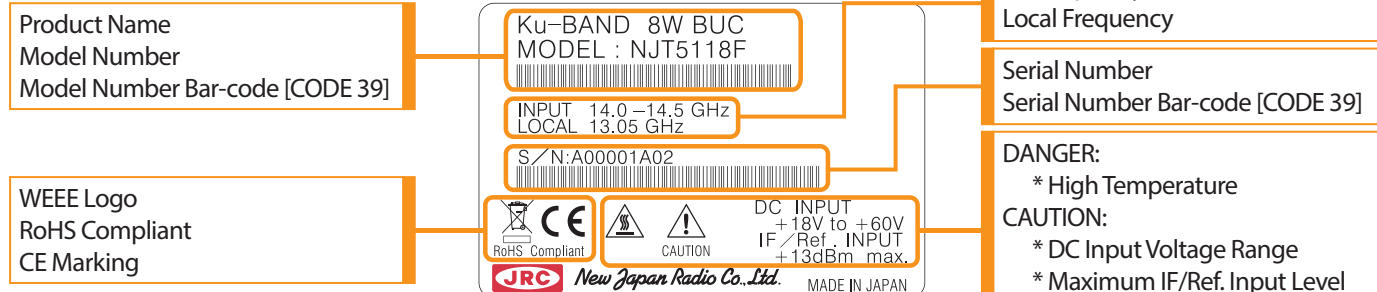
(for Example)



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.

BUC Label Format:



LNB Label Format:



Applicable Models: All models of LNB and BUC

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

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**.

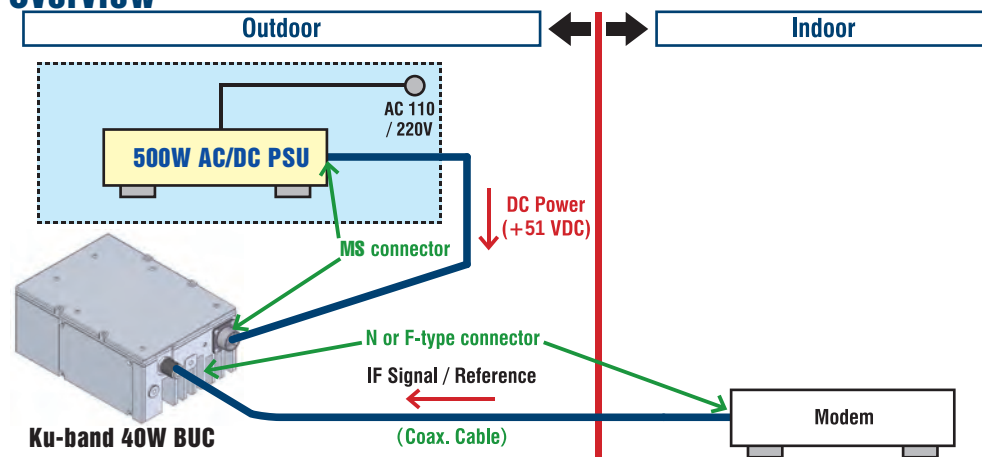


Outdoor 500W AC/DC PSU



Applicable Models:
NJT8371 series

Overview



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**.

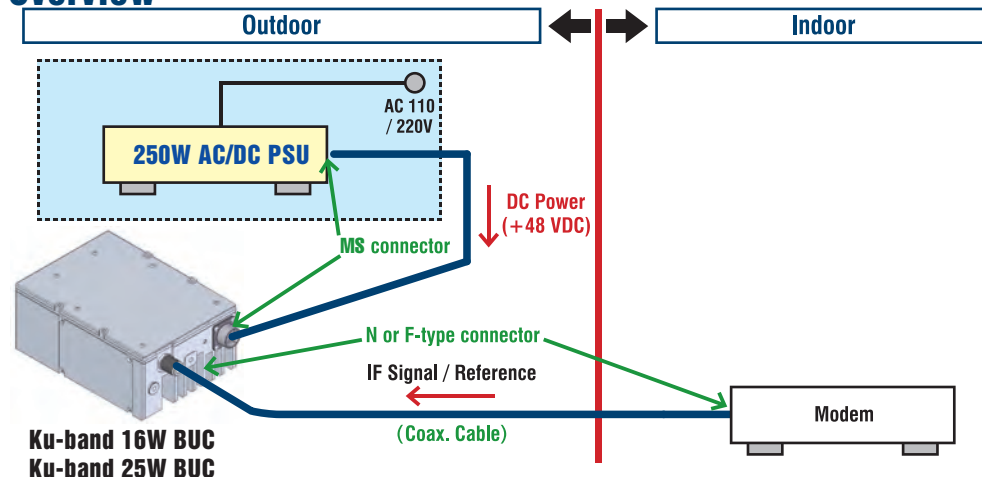


Outdoor 250W AC/DC PSU



Applicable Models:
NJT8319 and NJT8370 series

Overview

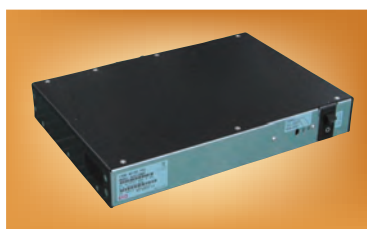


INDOOR 150W AC/DC PSU

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.

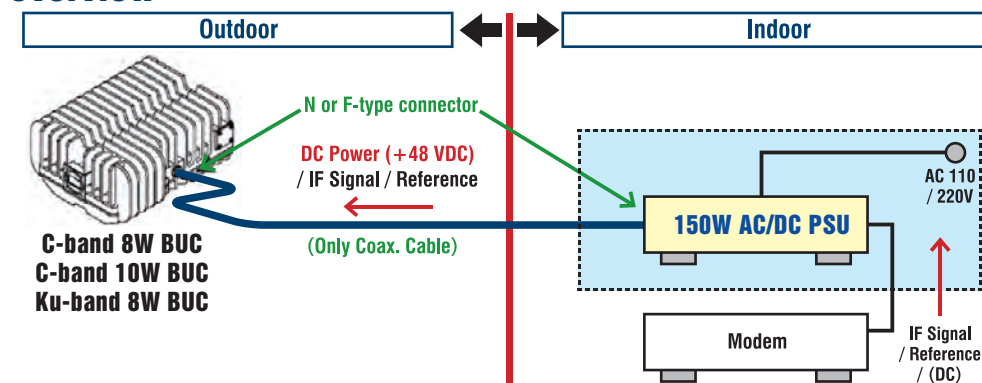
In addition the indoor 150W AC/DC PSU complies with **UL CERTIFICATION** and **EC DIRECTIVE** and this housing can fit the 1U rack mount with optional kit.



Indoor 150W AC/DC PSU

Applicable Models:
NJT5118, NJT5218, NJT5760,
NJT5762, NJT5763, NJT5764,
and NJT8318 series

Overview



FSK COMMUNICATIONS M&C

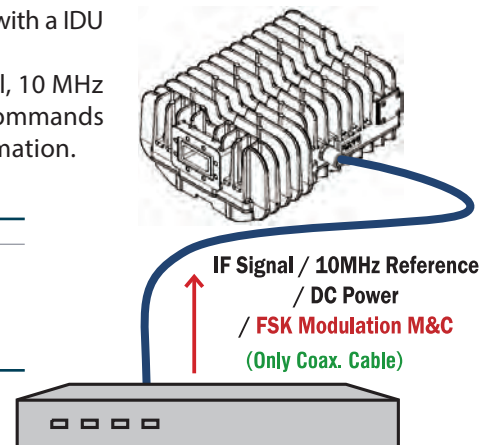
The BUC equipped FSK communications M&C includes capability to communicate with a IDU (e.g. satellite modem or M&C controller).

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

CONTROL	MONITOR
● Request Status ● Set Transmit On/Off Control	● Output Power Monitor * Detector Range: 20 dB (up to P1dB) * Accuracy: +/- 1.0 dB ● Temperature Monitor etc

Applicable Models: NJT5762, NJT5763, NJT5764, 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

CONTROL	MONITOR
● Request Status ● Transmit On/Off Control ● Step Attenuator Setting * Attenuator Range: 0 to 15.5 dB * Attenuator Step: 0.5 dB	● Output Power Monitor * Detector Range: 15 dB (up to P1dB/Psat) * Accuracy: +/- 1.0 dB ● Temperature Monitor ● Status * Temperature Out-of-Range * PLL Out-of-Lock * Tx Status - etc

Applicable Models: NJT8318, NJT8319, NJT8370 and NJT8371 series

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 POLICY

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 POLICY

The New Japan Radio Group recognizes that protecting the global environment is a significant universal subject to ensure sustainable growth, since we work together for the sake of environmental conservation in all fields of manufacturing, sales, and service of semiconductor and microwave products.

QUALITY & ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION

ISO 9001 : 2000

Registration Date: November 25, 1994

Last Renewal Date: January 10, 2015

Expiry Date: January 9, 2018

Certification Number: JQA-0686

Certification Organization: JQA (*)

(*) JQA: Japan Quality Assurance Organization

ISO 14001 : 2004

Registration Date: December 17, 2004

Last Renewal Date: January 13, 2015

Expiry Date: January 12, 2018

Certification Number: JQA-EM4431

Certification Organization: JQA



CAUTION

1. New Japan Radio Co., Ltd. (NJR) strives to produce reliable and high quality microwave components. NJR's microwave components are intended for specific applications and require proper maintenance and handling. To enhance the performance and service of NJR's microwave components, the devices, machinery or equipment into which they are integrated should undergo preventative maintenance and inspection at regularly scheduled intervals. Failure to properly maintain equipment and machinery incorporating these products can result in catastrophic system failures.
2. To ensure the highest levels of reliability, NJR products must always be properly handled. The introduction of external contaminants (e.g. dust, oil or cosmetics) can result in failures of microwave components.
3. NJR offers a variety of microwave components intended for particular applications. It is important that you select the proper component for your intended application. You may contact NJR's sales office or sales representatives, if you are uncertain about the products listed in the catalog and the specification sheets.
4. Special care is required in designing devices, machinery or equipment, which demand high levels of reliability. This is particularly important when designing critical components or systems whose foreseeable failure can result in situations that could adversely affect health or safety. In designing such critical devices, equipment or machinery, careful consideration should be given to, amongst other things, their safety design, fail-safe design, back-up and redundancy systems, and diffusion design.
5. The products listed in the catalog and specification sheets may not be appropriate for use in certain equipment where reliability is critical or where the products may be subjected to extreme conditions. You should consult our sales office or sales representatives before using the products in any of the following types of equipment.
 - * Aerospace Equipment
 - * Equipment Used in the Deep Sea
 - * Power Generator Control Equipment (nuclear, steam, hydraulic)
 - * Life Maintenance Medical Equipment
 - * Fire Alarm/Intruder Detector
 - * Vehicle Control Equipment (automobile, airplane, railroad, ship, etc.)
 - * Various Safety Equipment
6. NJR's products have been designed and tested to function within controlled environmental conditions. Do not use products under conditions that deviate from methods or applications specified in the catalog and specification sheets. Failure to employ NJR's products in the proper applications can lead to deterioration, destruction or failure of the products. NJR shall not be responsible for any bodily injury, fires or accidents, property damage or any consequential damages resulting from the misuse or misapplication of its products. PRODUCTS ARE SOLD WITHOUT WARRANTY OF ANY OF KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
7. The product specifications and descriptions listed in the catalog and brochure are subject to change at any time, without notice.

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:

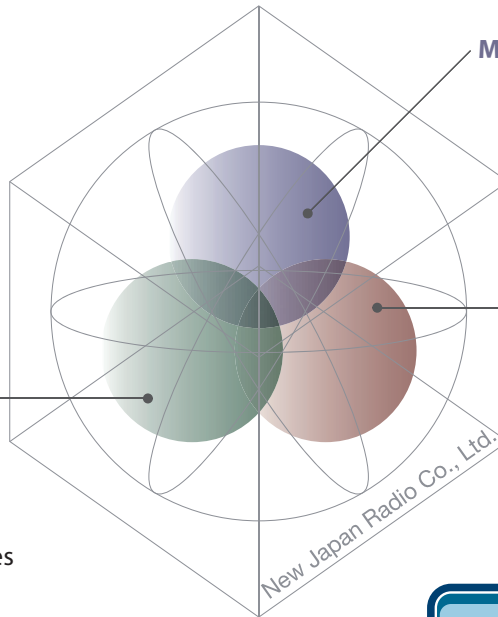
- Semiconductor devices
- Microwave application products
- Microwave tubes and radar components

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



Semiconductor Devices

- ◆ MOS ICs
- ◆ Bipolar ICs
- ◆ GaAs ICs
- ◆ SAW Devices
- ◆ Optoelectronic Devices
- ◆ MEMS



Microwave Tubes and Radar Components

- ◆ Electron tubes and peripheral devices
- ◆ Electron guns and cathodes

Microwave Application Products

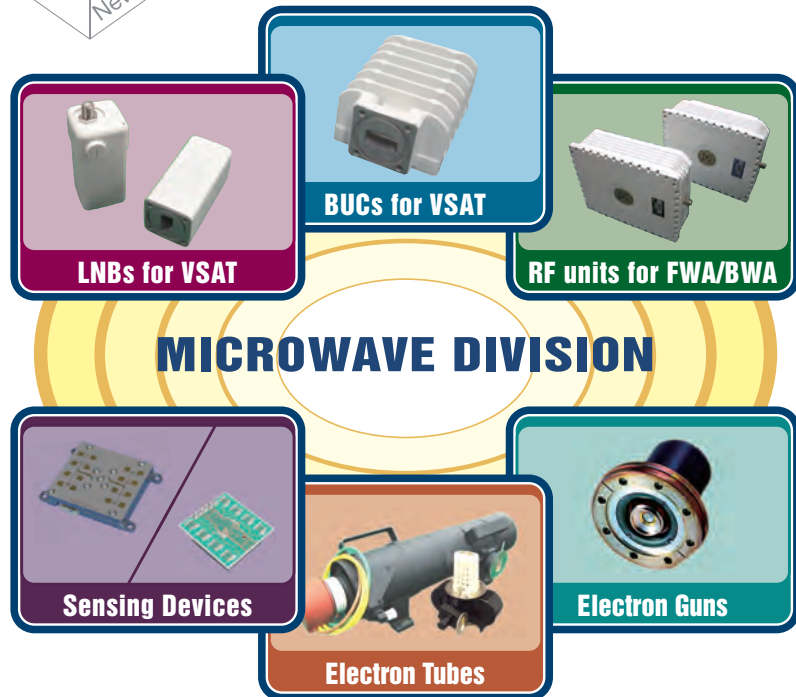
- ◆ Components for Satellite Communications
- ◆ Sensor components

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.



New Japan Radio Co., Ltd.

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