



New Japan Radio Co., Ltd.

A background image showing a large portion of the Earth from space, with the blue oceans and white clouds of the Western Hemisphere visible. The Earth's curve is prominent. In the bottom right corner, a portion of the dark, cratered surface of the Moon is visible.

***VSAT
Products
Line-up
2013-2014***

Ku-band BUC

Output Power ↑	High Power	16W	(NEW!) NJT8319 series	
	Middle Power	8W	(NEW!) NJT8318 series	
			NJT5218 series	
		6W	NJT5118 series	
		4W	NJT5127 series	
	Low Power	3W	NJT5207 series	
		1.5W	NJT5307 series	
			NJT8302 series	
			NJT8301 series	
			Extended Ku 13.75 to 14.25 GHz	
			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 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	(NEW!) NJT5763 series		
			NJT5762 series		
		8W	(NEW!) NJT5761 series		
			(NEW!) NJT5760 series		
		5W	NJT5677 series		
	NJT5669 series		NJT5670 series	NJT5675 series	
Low Power	3W	(NEW!) NJT5679 series		NJT5674 series	
	2W	NJT5667 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 →

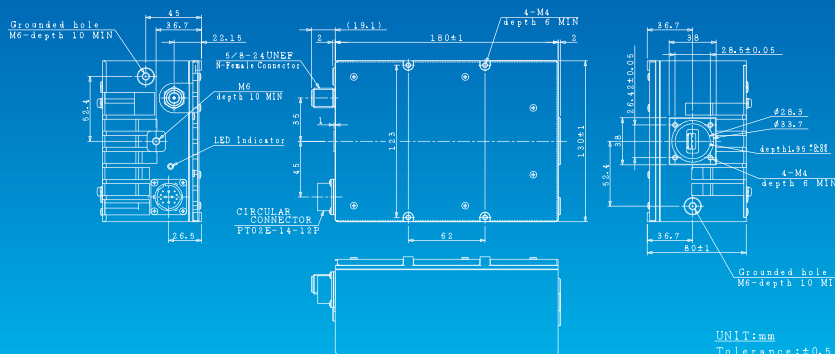
C-band LNA/LNB

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 Compact Ku-band 8W & 16W BUC: NJT8318 & NJT8319 series

NEW

UNIT:mm
Tolerance:±0.5**High Efficiency & Low Distortion**

(16W Model)

P1dB: +42 dBm min. over temperature

Power Consumption: 160 W

IM3: -28 dBc @ Pout ≤ +39 dBm

(8W Model)

P1dB: +39 dBm min. over temperature

Power Consumption: 80 W

IM3: -28 dBc @ Pout ≤ +36 dBm

FSK Communications M&C Option**High Temperature Operating**

Operation Guarantee Temperature Range: -40 to +75 °C

Smaller Size & Light Weight

Weight: 2.4 kg

Dimension: 180 x 130 x 80 mm

LED Indicator Equipped**NEW Full C-band BUC Line-up****10W BUC:
NJT5763 series**

NEW

High Efficiency Output Power

P1dB: +40 dBm min.

Power Consumption: 75 W

Compact Size & Light Weight

Weight: 3.2 kg

Dimension: 219.5 x 175 x 99 mm

LED Indicator Equipped**8W BUC:
NJT5761 series**

NEW

High Efficiency Output Power

P1dB: +39 dBm min.

Power Consumption: 64 W

Compact Size & Light Weight

Weight: 3.2 kg

Dimension: 219.5 x 175 x 99 mm

LED Indicator Equipped**5W BUC:
NJT5677 series****High Efficiency Output Power**

P1dB: +37 dBm min.

Power Consumption: 48 W

Compact Size & Light Weight

Weight: 1.9 kg

Dimension: 190.6 x 160 x 59 mm

LED Indicator Equipped**3W BUC:
NJT5679 series**

NEW

High Efficiency Output Power

P1dB: +34 dBm min.

Power Consumption: 35 W

Compact Size & Light Weight

Weight: 1.9 kg

Dimension: 190.6 x 160 x 59 mm

LED Indicator Equipped**FULL C-BAND BUCs**

The Full C-band BUCs can cover the two C-bands of Standard C-band: 5.850 to 6.425 GHz and Palapa C-band: 6.365 to 6.725 GHz as shown in illustration.

Full C-band
5.850 to 6.725 GHz

Standard C-band
5.850 to 6.425 GHz

Palapa C-band
6.365 to 6.725 GHz

RF FREQUENCY

Applicable Models: NJT5677, NJT5679, NJT5761 and NJT5763 series



Ku-band BUC

V SAT
PRODUCTS

2013-2014

16W / 8W BUC : NJT8318 & NJT8319 series

16W 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 Connector	
NJT8319UNMA					N-type		Enclosed *Note2 Outdoor AC/DC PSU	DC Power	
NJT8319UFMA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319UNK					N-type	FSK Communications M&C *Note1	NA	DC Power	
NJT8319UFK					F-type			Input Port: IF Connector	
NJT8319UNMK					N-type			DC Power	
NJT8319UFMK					F-type			Input Port: MS Connector	
NJT8319UNMKA					N-type		Enclosed *Note2 Outdoor AC/DC PSU	DC Power	
NJT8319UFMKA					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 Connector	
NJT8319NMA					N-type		Enclosed *Note2 Outdoor AC/DC PSU	DC Power	
NJT8319FMA					F-type			Supplied by Outdoor AC/DC PSU	
NJT8319NK					N-type	FSK Communications M&C *Note1	NA	DC Power	
NJT8319FK					F-type			Input Port: IF Connector	
NJT8319NMK					N-type			DC Power	
NJT8319FMK					F-type			Input Port: MS Connector	
NJT8319NMKA					N-type		Enclosed *Note2 Outdoor AC/DC PSU	DC Power	
NJT8319FMKA					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 "OUTDOOR 200W AC/DC PSU"

8W 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	
NJT8318UNNM					N-type			DC Power	
NJT8318UFM					F-type			Input Port: MS Connector	
NJT8318UNA					N-type		Enclosed *Note3 Indoor AC/DC PSU	DC Power	
NJT8318UFA					F-type			Supplied by Indoor AC/DC PSU	
NJT8318UNK					N-type	FSK Communications M&C *Note1	NA	DC Power	
NJT8318UFK					F-type			Input Port: IF Connector	
NJT8318UNMK					N-type			DC Power	
NJT8318UFMK					F-type			Input Port: MS Connector	
NJT8318UNKA					N-type		Enclosed *Note3 Indoor AC/DC PSU	DC Power	
NJT8318UFKA					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 Connector	
NJT8318NA					N-type		Enclosed *Note3 Indoor AC/DC PSU	DC Power	
NJT8318FA					F-type			Supplied by Indoor AC/DC PSU	
NJT8318NK					N-type	FSK Communications M&C *Note1	NA	DC Power	
NJT8318FK					F-type			Input Port: IF Connector	
NJT8318NMK					N-type			DC Power	
NJT8318FMK					F-type			Input Port: MS Connector	
NJT8318NKA					N-type		Enclosed *Note3 Indoor AC/DC PSU	DC Power	
NJT8318FKA					F-type			Supplied by Indoor AC/DC PSU	

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

*Note3: The detail is shown in section of "INDOOR 150W AC/DC PSU"



NEW Standard Ku 16W: NJT8319 series
NEW Universal Ku 16W: NJT8319U series
NEW Standard Ku 8W: NJT8318 series
NEW Universal Ku 8W: NJT8318U series

Model Numbering System

N J T 8 3 1 9 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

DC Input Connector:

Non Suffix: IF Interface Connector

M: MS Connector

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 @ 1dB G.C.P.:

19: +42.0 dBm (16W)

18: +39.0 dBm (8W)

Product Series Model Number

*Note4:

In case of 16W BUC: NJT8319 series, the enclosed unit is Outdoor 200W AC/DC PSU.

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

■ 16W / 8W BUC : NJT8318 & NJT8319 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 : (16W) NJT8319 series +39 dBm min. over temperature : (8W) NJT8318 series
Conversion Gain	68 dB nom., 62 dB min. over temperature : (16W) NJT8319 series 65 dB nom., 59 dB min. over temperature : (8W) NJT8318 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	+36 to +60 VDC at BUC Input Port : (16W) NJT8319 series +18 to +60 VDC at BUC Input Port : (8W) NJT8318 series 90 to 264 VAC at Indoor/Outdoor AC/DC PSU: (AC Power Option) NJT8318NA / 18FA / 18NKA / 18FKA / 18UNA / 18UFA / 18UNKA / 18UFKA, NJT8319NMA / 19FMA / 19NMKA / 19FMKA / 19UNMA / 19UFMA / 19UNMKA / 19UFMKA
Power Consumption	160 W typ., 180 W max. : (16W) NJT8319 series 80 W typ., 90 W max. : (8W) NJT8318 series
Port for Voltage Input	Same as IF Connector : NJT8318N / 18F / 18NK / 18FK / 18UN / 18UF / 18UNK / 18UFK, NJT8319N / 19F / 19NK / 19FK / 19UN / 19UF / 19UNK / 19UFK MS Connector : NJT8318NM / 18FM / 18NMK / 18FMK / 18UNM / 18UFM / 18UNMK / 18UFMK, NJT8319NM / 19FM / 19NMK / 19FMK / 19UNM / 19UFM / 19UNMK / 19UFMK MS Connector supplied by Outdoor AC/DC PSU : NJT8319NMA / 19FMA / 19NMKA / 19FMKA / 19UNMA / 19UFMA / 19UNMKA / 19UFMKA IF Connector supplied by Indoor AC/DC PSU through IF Cable : NJT8318NA / 18FA / 18NKA / 18FKA / 18UNA / 18UFA / 18UNKA / 18UFKA
Temperature Range (ambient)	Operating : (Operation Guarantee) -40 to +75 °C (Performance Guarantee) -40 to +55 °C Storage : -40 to +75 °C
Cooling	Forced-air-cooling by FAN
Dimension (without Interface Connector and Screws)	(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]

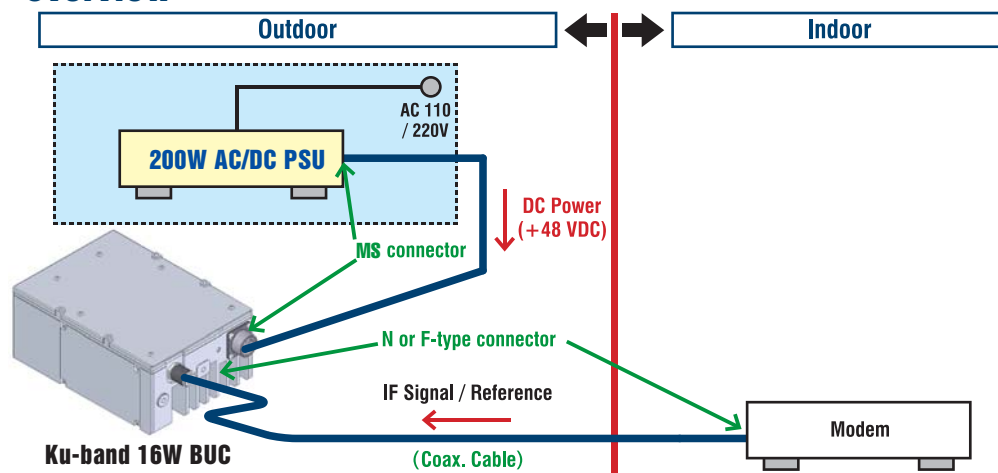
OUTDOOR 200W AC/DC PSU

The features of Outdoor 200W AC/DC Power Supply Unit (PSU) are to provide the stable +48V DC power to operate Ku-band 16W 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 AC/DC PSU complies with **EC DIRECTIVE**.



NEW Outdoor 200W AC/DC PSU

Overview



■ Specifications

Item	Specifications
Input AC Voltage Range	90 to 264 V
Input AC Power	300 VA max.
Output DC Voltage	+48 V typ.
Output DC Power Capacity	200 W max.
Efficiency / Power Factor	90 % / 0.9
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
Dimension (without Interface Connector)	(L) 186 x (W) 133 x (H) 60 mm [(L) 7.32" x (W) 5.24" x (H) 2.36"]
Weight	1.6 kg [3.5 lbs]

Applicable Models:
NJT8319 series

■ 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 *Note5 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 *Note5 Indoor AC/DC PSU	Supplied by Indoor AC/DC PSU	

*Note5: 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 Box: (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
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]

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

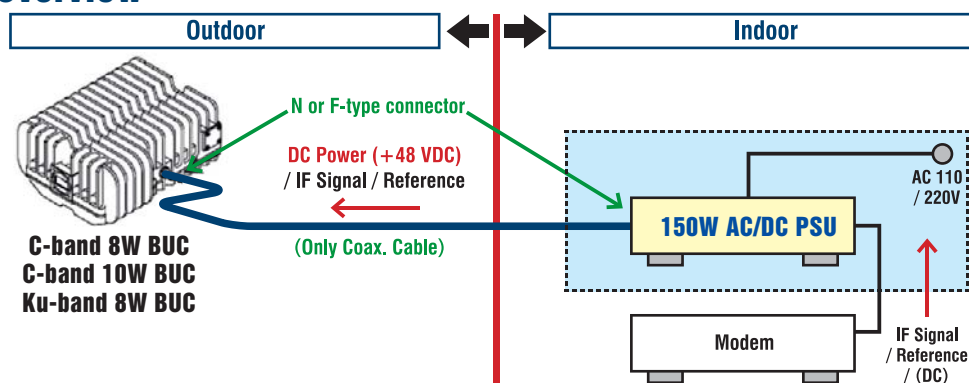


Indoor 150W AC/DC PSU

Applicable Models:

NJT5118, NJT5218, NJT5760,
NJT5761, NJT5762, NJT5763,
and NJT8318 series

Overview



■ 6W / 4W BUC : NJT5127, NJT5207 & NJT5307 series



Standard Ku 6W: NJT5127 series

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

● 6W BUC: NJT5127 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT5127L	14.00 to 14.50 GHz	13.05 GHz	950 to 1,450 MHz	+37.8 dBm min.	N-type	Equipped
NJT5127FL	(Standard Ku-band)			(6W)	F-type	

● 4W BUC: NJT5207 & NJT5307 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT5207N	13.75 to 14.50 GHz	12.80 GHz	950 to 1,700 MHz	+36 dBm min.	N-type	Equipped
NJT5207F	(Universal Ku-band)			(4W)	F-type	
NJT5307N	14.00 to 14.50 GHz	13.05 GHz	950 to 1,450 MHz		N-type	
NJT5307F	(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.	+37.8 dBm min. over temperature : (6W) NJT5127L / 27FL +36.0 dBm min. over temperature : (4W) NJT5207N / 07F, NJT5307N / 07F
Conversion Gain	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	+15 to +24 VDC : (6W) NJT5127L / 27FL +15 to +30 VDC : (4W) NJT5207N / 07F, NJT5307N / 07F
Power Consumption	63 W max. : (6W) NJT5127L / 27FL 37 W max. : (4W) NJT5207N / 07F, NJT5307N / 07F
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
Dimension (without Interface Connector)	(L) 186.4 x (W) 167 x (H) 83 mm [(L) 7.33" x (W) 6.57" x (H) 3.27"] : (6W) NJT5127L / 27FL (L) 175.9 x (W) 143 x (H) 56.5 mm [(L) 6.93" x (W) 5.63" x (H) 2.22"] : (4W) NJT5207N / 07F, NJT5307N / 07F
Weight	2.4 kg [5.3 lbs] : (6W) NJT5127L / 27FL 1.7 kg [3.7 lbs] : (4W) NJT5207N / 07F, NJT5307N / 07F

■ 3W / 1.5W BUC : NJT8301 & NJT8302 series

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.	N-type	NA
NJT8302UF	(Universal Ku-band)			(3W)	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.	N-type	NA
NJT8301UF	(Universal Ku-band)			(1.5W)	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 dBm min. over temperature : (3W) NJT8302N / 02F / 02UN / 02UF +31 dBm min. over temperature : (1.5W) NJT8301N / 01F / 01UN / 01UF
Conversion Gain	58 dB typ., 51 dB min. : (3W) NJT8302N / 02F / 02UN / 02UF 55 dB typ., 48 dB min. : (1.5W) NJT8301N / 01F / 01UN / 01UF
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) NJT8302N / 02F / 02UN / 02UF 12 W typ., 14 W max. : (1.5W) NJT8301N / 01F / 01UN / 01UF
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
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]

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

UNIVERSAL KU-BAND



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 *Note6	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 GHz High Band: 1,100 to 2,150 GHz	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				22kHz Tone	+/- 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 *Note6	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 GHz	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 GHz	22kHz Tone		F-type
NJR2842EN						N-type
NJR2843E				Input Voltage		F-type
NJR2843EN						N-type

*Note6: The detail is shown in section of "LOCAL FREQUENCY SELECTION"

■ Specifications

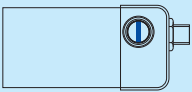
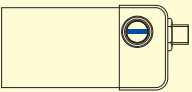
Item	Specifications
Input Interface	Waveguide, WR 75 with Groove
Output Interface	Coax. Connector, N-type female (50 ohm) / F-type female (75 ohm)
Noise Figure (at +25 °C)	0.8 dB
Conversion Gain (at +25 °C)	62 dB max., 48 dB min.
Requirement External Reference Signal (Only External Reference Type is 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 max. : (Internal Reference Type) 200 mA max. : (External Reference Type)
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +80 °C
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

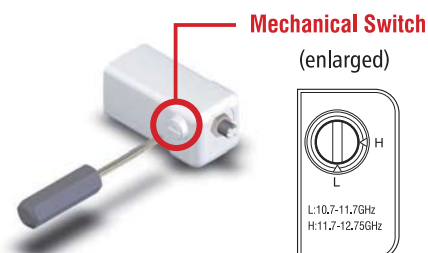
- Mechanical Switch
- 22kHz Tone On/Off
- Input Voltage High/Low

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

2013-2014

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	11.20 to 11.70 GHz	10.25 GHz	950 to 1,450 MHz	(+/- 10 kHz typ.)	N-type
NJR2839H				+/- 10 ppm	F-type
NJR2839HN				(+/- 100 kHz typ.)	N-type
NJR2839S				+/- 3 ppm	F-type
NJR2839SN				(+/- 30 kHz typ.)	N-type
NJR2839U	11.70 to 12.20 GHz	10.75 GHz	950 to 1,450 MHz	+/- 1 ppm	F-type
NJR2839UN				(+/- 10 kHz typ.)	N-type
NJR2835H				+/- 10 ppm	F-type
NJR2835HN				(+/- 100 kHz typ.)	N-type
NJR2835S				+/- 3 ppm	F-type
NJR2835SN	12.25 to 12.75 GHz	11.30 GHz	950 to 1,450 MHz	(+/- 30 kHz typ.)	N-type
NJR2835U				+/- 1 ppm	F-type
NJR2835UN				(+/- 10 kHz typ.)	N-type
NJR2836H				+/- 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 max.
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +80 °C
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		
NJR2754H	12.25 to 12.75 GHz	11.30 GHz	950 to 1,450 MHz		

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 max.
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +80 °C
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

V SAT
PRODUCTS

2013-2014

10W / 8W BUC : NJT5760 & NJT5762 series

10W BUC: NJT5762 & NJT5763 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	AC Power Option	Power Supply	M&C Function	LED Indicator
NJT5762N	5.850 to 6.425 GHz (Standard C-band)	4.90 GHz	950 to 1,525 MHz	+40 dBm min. (10W)	N-type	NA	DC Power	NA	Equipped
NJT5762F					F-type		Input Port: IF Connector		
NJT5762NM					N-type		DC Power		
NJT5762FM					F-type		Input Port: MS Connector		
NJT5762NA					N-type	Enclosed *Note7 Indoor AC/DC PSU	DC Power	Supplied by Indoor AC/DC PSU	FSK Communications M&C *Note8
NJT5762FA					F-type		Input Port: IF Connector		
NJT5762KN					N-type		DC Power		
NJT5762KF					F-type		Input Port: MS Connector		
NJT5762KNM					N-type	NA	DC Power	NA	Equipped
NJT5762KFM					F-type		Input Port: IF Connector		
NJT5763N	5.850 to 6.725 GHz (Full C-band)		950 to 1,825 MHz		N-type	Enclosed *Note7 Indoor AC/DC PSU	DC Power	Supplied by Indoor AC/DC PSU	FSK Communications M&C *Note8
NJT5763F					F-type		Input Port: IF Connector		
NJT5763NM					N-type		DC Power		
NJT5763FM					F-type		Input Port: MS Connector		
NJT5763NA					N-type	NA	DC Power	NA	Equipped
NJT5763FA					F-type		Input Port: IF Connector		
NJT5763KN					N-type		DC Power		
NJT5763KF					F-type		Input Port: MS Connector		
NJT5763KNM					N-type	NA	DC Power	Supplied by Indoor AC/DC PSU	FSK Communications M&C *Note8
NJT5763KFM					F-type		Input Port: IF Connector		

8W BUC: NJT5760 & NJT5761 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		Input Port: MS Connector		
NJT5760NA					N-type	Enclosed *Note7 Indoor AC/DC PSU	DC Power	Supplied by Indoor AC/DC PSU	FSK Communications M&C *Note8
NJT5760FA					F-type		Input Port: IF Connector		
NJT5760KN					N-type		DC Power		
NJT5760KF					F-type		Input Port: MS Connector		
NJT5760KNM					N-type	NA	DC Power	NA	Equipped
NJT5760KFM					F-type		Input Port: IF Connector		
NJT5761N	5.850 to 6.725 GHz (Full C-band)		950 to 1,825 MHz		N-type	Enclosed *Note7 Indoor AC/DC PSU	DC Power	Supplied by Indoor AC/DC PSU	FSK Communications M&C *Note8
NJT5761F					F-type		Input Port: IF Connector		
NJT5761NM					N-type		DC Power		
NJT5761FM					F-type		Input Port: MS Connector		
NJT5761NA					N-type	NA	DC Power	NA	Equipped
NJT5761FA					F-type		Input Port: IF Connector		
NJT5761KN					N-type		DC Power		
NJT5761KF					F-type		Input Port: MS Connector		
NJT5761KNM					N-type	NA	DC Power	Supplied by Indoor AC/DC PSU	FSK Communications M&C *Note8
NJT5761KFM					F-type		Input Port: IF Connector		

*Note7: The detail is shown in section of "INDOOR 150W AC/DC PSU"

*Note8: The detail is shown in section of "FSK COMMUNICATIONS M&C"



Standard C 10W: NJT5762 series

Full C 10W: NJT5763 series

Standard C 8W: NJT5760 series

Full C 8W: NJT5761 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 series +39 dBm min. over temperature : (8W) NJT5760 / NJT5761 series
Conversion Gain	64 dB nom., 58 dB min. : (10W) NJT5762 / NJT5763 series 63 dB nom., 57 dB min. : (8W) NJT5760 / NJT5761 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 / 61NA / 60FA / 62NA / 62FA / 63NA / 63FA
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 63 W typ., 70W max. : (8W / Standard C-band) NJT5760 series 64 W typ., 70 W max. : (8W / Full C-band) NJT5761 series
Port for Voltage Input	Same as IF Connector: NJT5760N / 60F / 60KN / 60KF / 61N / 61F / 61KN / 61KF / 62N / 62F / 62KN / 62KF / 63N / 63F / 63KN / 63KF MS Connector: NJT5760NM / 60FM / 60KNM / 60KFM / 61NM / 61FM / 61KNM / 61KFM, NJT5762NM / 62FM / 62KNM / 62KFM / 63NM / 63FM / 63KNM / 63KFM IF Connector supplied by Indoor AC/DC PSU through IF Cable: NJT5760NA / 60FA / 61NA / 60FA / 62NA / 62FA / 63NA / 63FA
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
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]

■ 5W / 3W / 2W BUC : NJT5667, NJT5669 & NJT5679 series

FULL C-BAND



Standard C 5W: NJT5669 series

Full C 5W: NJT5677 series

Palapa C 5W: NJT5675 series

Insat C 5W: NJT5670 series

FULL C-BAND



NEW Full C 3W: NJT5679 series

Standard C 2W: NJT5667 series

Palapa C 2W: NJT5674 series

Insat C 2W: NJT5678 series

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

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT5669	5.850 to 6.425 GHz (Standard C-band)	4.90 GHz	950 to 1,525 MHz	+37 dBm min. (5W)	N-type	Equipped
NJT5669F					F-type	
NJT5670N	5.850 to 6.725 GHz (Full C-band)		950 to 1,825 MHz		N-type	
NJT5670F					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 BUC: NJT5679 series

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

● 2W BUC: NJT5667, NJT5668 & NJT5674 series

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	LED Indicator
NJT5667	5.850 to 6.425 GHz (Standard C-band)	4.90 GHz	950 to 1,525 MHz	+33 dBm min. (2W)	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 dBm min. over temperature : (5W) NJT5669 / 69F / 70 / 70F / 75N / 75F / 77N / 77F +34 dBm min. over temperature : (3W) NJT5679N / 79F +33 dBm min. over temperature : (2W) NJT5667 / 67F / 68 / 68F / 74N / 74F
Conversion Gain	61 dB nom. : (5W) NJT5669 / 69F / 70 / 70F / 75N / 75F / 77N / 77F 58 dB nom. : (3W) NJT5679N / 79F 58 dB nom. : (2W) NJT5667 / 67F / 68 / 68F / 74N / 74F
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 -60 dBc/Hz @100Hz -70 dBc/Hz @1kHz -80 dBc/Hz @10kHz -90 dBc/Hz @100kHz -100 dBc/Hz @1MHz
Phase Noise (SSB)	
Input V.S.W.R.	2.0 : 1 max. @ IF Frequency
Output V.S.W.R.	2.0 : 1 max. @ RF Frequency
Power Requirement	+15 to +30 VDC
Power Consumption	48 W max. : (5W) NJT5669 / 69F / 70 / 70F / 75N / 75F / 77N / 77F 35 W max. : (3W) NJT5679N / 79F 33 W max. : (2W) NJT5667 / 67F / 68 / 68F / 74N / 74F
Temperature Range (ambient)	Operating : -40 to +55 °C Storage : -40 to +75 °C
Dimension (without Interface Connector)	(L) 190.6 x (W) 160 x (H) 59 mm [(L) 7.50" x (W) 6.30" x (H) 2.32"]
Weight	1.9 kg [4.2 lbs]

FSK COMMUNICATIONS M&C

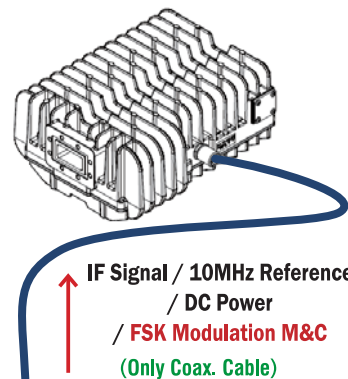
The BUC equipped FSK communications M&C includes capability to communicate with a IDU (e.g. satellite modem or M&C controller).

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 State ● Change BUC Address ● Set Carrier Frequency	● Output Power Monitor * Detector Range: 20 dB (up to P1dB) * Accuracy: +/- 1.0 dB ● Temperature Monitor etc ● Status * Temperature Out-of-Range * PLL Out-of-Lock * Tx Status

Applicable Models: NJT5760, NJT5761, NJT5762, NJT5763, NJT8318 and NJT8319 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				(+/- 5 kHz typ.)	N-type
NJS8487H	3.625 to 4.200 GHz (Standard C-band)	5.15 GHz	950 to 1,525 MHz	+/- 10 ppm	F-type
NJS8487HN				(+/- 50 kHz typ.)	N-type
NJS8487S				+/- 3 ppm	F-type
NJS8487SN				(+/- 15 kHz typ.)	N-type
NJS8487U				+/- 1 ppm	F-type
NJS8487UN				(+/- 5 kHz typ.)	N-type
NJS8488H	4.500 to 4.800 GHz (Insat C-band)	5.76 GHz	960 to 1,260 MHz	+/- 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 (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 max. : (Internal Reference type) NJS8486 series 400 mA max. : (External Reference type) NJS8486E series
Temperature Range (ambient)	Operating : -40 to +60 °C Storage : -40 to +80 °C
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
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]

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 2004/108/EC and Reduction of Hazardous Substance (RoHS) directive 2011/65/EU.



PRODUCT LABEL

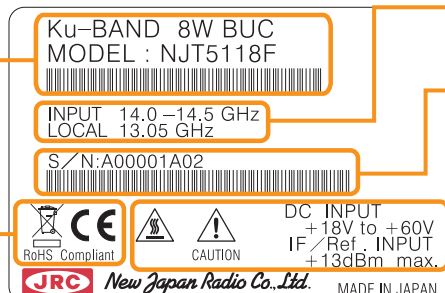
The common product label with following format is employed for both of all LNBs and BUCs manufactured by New Japan Radio Co., Ltd.

BUC Label Format:

Product Name
Model Number
Model Number Bar-code [CODE 39]

WEEE Logo
RoHS Compliant
CE Marking

(for Example)



RF Frequency
Local Frequency

Serial Number
Serial Number Bar-code [CODE 39]

DANGER:
* High Temperature
CAUTION:
* DC Input Voltage Range
* Maximum IF/Ref. Input Level

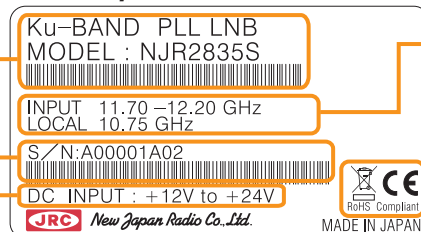
LNB Label Format:

Product Name
Model Number
Model Number Bar-code [CODE 39]

Serial Number
Serial Number Bar-code [CODE 39]

DC Input Voltage Range

(for Example)



RF Frequency
Local Frequency & Stability

WEEE Logo
RoHS Compliant
CE Marking

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

LED INDICATOR

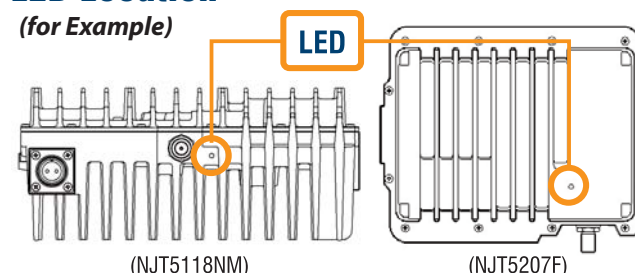
BUC products integrated with LED Indicator show normal or abnormal conditions.

Status Chart

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

LED Location

(for Example)



Applicable Models: All models of BUC except NJT8301/02 series

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:

CAUTION 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.

CAUTION Cover

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

CAUTION Product Label

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

CAUTION Connector

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

CAUTION 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.

CAUTION 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.

CAUTION Input IF Level

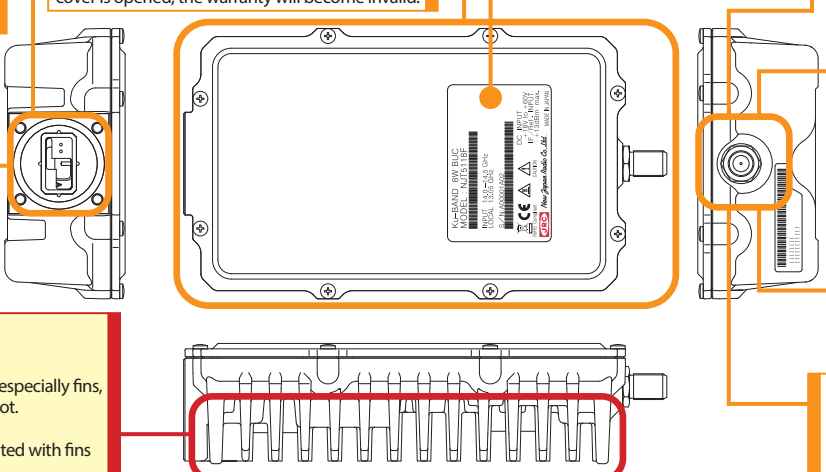
DO NOT supply IF signal over the maximum level indicated on product label of +10 or +13 dBm.

WARNING 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.

CAUTION 10MHz Reference

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



LNBS Instructions:

CAUTION 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.

CAUTION Cover

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

CAUTION Product Label

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

CAUTION Connector

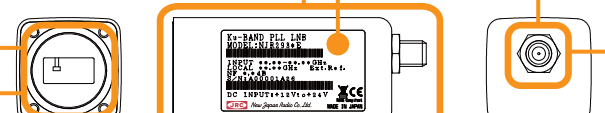
Connect the IF cable with 0.68 to 1.13 N·m torques.

CAUTION Input RF Level

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

CAUTION 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.



NEW JAPAN RADIO COMPANY QUALITY & ENVIRONMENTAL POLICY

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, 2009

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, 2009

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:

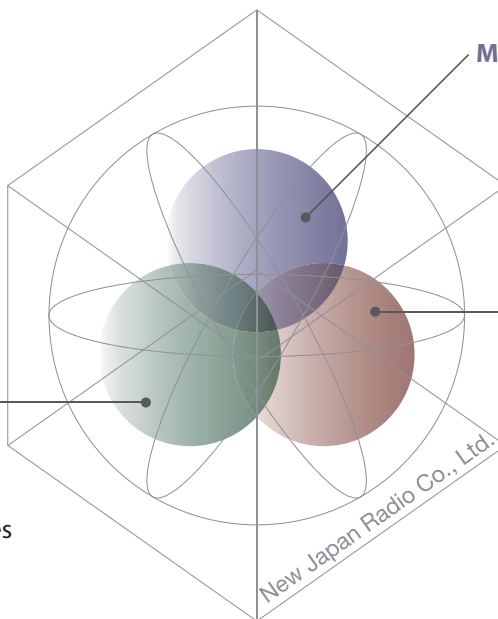
- Semiconductor devices
- Microwave application products
- Microwave tubes and radar components

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



Semiconductor Devices

- ◆ MOS ICs
- ◆ Bipolar ICs
- ◆ Microwave & Optoelectronic Devices



Microwave Tubes and Radar Components

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

Microwave Application Products

- ◆ Components for Satellite Communications
- ◆ Sensor components

Microwave Components (MC) 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 MC 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)

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



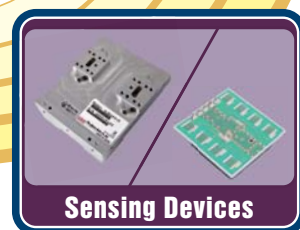
LNBs for VSAT



BUCs for VSAT



RF units for FWA/BWA



Sensing Devices

MICROWAVE COMPONENTS



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Microwave Components Division

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