Released

Standard C-band 10W BUC

RF Frequency: 5.85 to 6.425 GHz

Model No. NJT5762 series

RF Frequency	:	5.85 to 6.425 GHz
LO Frequency	:	4.90 GHz
IF Frequency	:	950 to 1,525 MHz
Output Power @ 1dB G.C.P.	:	+40 dBm (10W)
IF / Ref. (10MHz) Input:		N-type / F-type, Female Connector
DC Power Input	:	MS Connector / IF Connector (*)
M&C Option	:	FSK Communication M&C

Specifications
Rev.07 December 1, 2016

*) MS Connector models are available to apply DC voltage via only MS Connector.

Caution

1. NJRC strives to produce reliable and high quality microwave components. NJRC's microwave components are intended for specific applications and require proper maintenance and handling. To enhance the performance and service of NJRC'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, NJRC 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. NJRC 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 NJRC'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

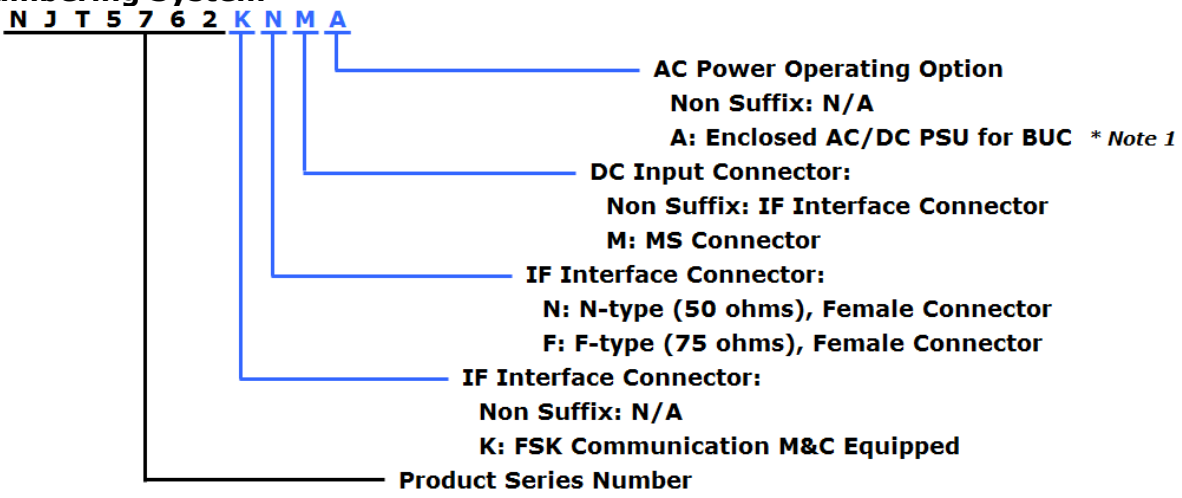
6. NJRC's products have been designed and tested to function within controlled environmental conditions. Do not use products under conditions that deviate from methods or applications specified in the catalog and specification sheets. Failure to employ NJRC's products in the proper applications can lead to deterioration, destruction or failure of the products. NJRC 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 specification sheets are subject to change at any time, without notice.

* Above Specifications are subject to change without notice.

Model Number

- **Numbering System**



- **Line-up**

Model No.	RF Frequency	Local Frequency	IF Frequency	Output Power @ P1dB	IF Connector	Power Supply	Port for Voltage Input	M&C Option
NJT5762N	5.85 to 6.425 GHz (Standard C-band)	4.90 GHz	950 to 1,525 MHz	10 W Linear (+40 dBm min.)	N-type	+18 to +60 V DC Power	IF Connector	N/A
NJT5762F					F-type			
NJT5762NM					N-type		MS Connector	
NJT5762FM					F-type			
NJT5762NA					N-type	AC Power	IF Connector * Note 1	
NJT5762FA					F-type			
NJT5762KN					N-type	+18 to +60 V DC Power	IF Connector	FSK M&C
NJT5762KF					F-type			
NJT5762KNM					N-type		MS Connector	
NJT5762KFM					F-type			

*Note1: Additional indoor 150W AC/DC PSU is enclosed for AC Power Option and DC Power is supplied at IF connector of BUC from AC/DC PSU via IF cable.

* Above Specifications are subject to change without notice.

1. Electrical Specifications

#	Items	Specifications
1-1.	Output Frequency Range	5.850 to 6.425 GHz
1-2.	Input Frequency Range	950 to 1,525 MHz
1-3.	Maximum IF Input Level (without damage)	+13 dBm max.
1-4.	Conversion Type	Single, fixed L.O.
1-5.	L.O. Frequency	4.90 GHz
1-6.	Frequency Sense	Positive
1-7.	Output Power @ 1dB G.C.P.	+40 dBm min. over temperature
1-8.	Linear Gain	64 dB nom., 58 dB min.
1-9.	Gain Variation over frequency @ fixed temperature	4 dBp-p max. over 575 MHz 2 dBp-p max. over 54 MHz
1-10.	Gain Stability over temperature @ fixed frequency	4 dBp-p max. 2 dBp-p typ.
1-11.	IM3	-28 dBc typ., -26 dBc max. @ total power <= +40 dBm - 3 dB
1-12.	Requirement for External Reference [Frequency] [Input Power] [Phase Noise]	 10 MHz (sine-wave) -5 to +5 dBm @ Input port -125 dBc/Hz max. @ 100 Hz -135 dBc/Hz max. @ 1 kHz -140 dBc/Hz max. @ 10 kHz
1-13.	L.O. Phase Noise	-60 dBc/Hz max. @ 100 Hz -70 dBc/Hz max. @ 1 kHz -80 dBc/Hz max. @ 10 kHz -90 dBc/Hz max. @ 100 kHz -100 dBc/Hz max. @ 1MHz
1-14.	Spurious @ Pout = +40 dBm [in band] [in receive and] [Out-of-band]	 -50 dBc max. @ 5.850 to 6.425 GHz -70 dBm max. @ 3.625 to 4.200 GHz -50 dBc max.
1-15.	Receive Band Noise Density	-87 dBm/4kHz max. @ 3.625 to 4.200 GHz
1-16.	Input Impedance	
	<N-type Model>	50 ohms nom.
	<F-type Model>	75 ohms nom.
1-17.	Input V.S.W.R.	2 : 1 max
1-18.	Output V.S.W.R.	2 : 1 max.
1-19.	Output Load VSWR for Non Damage	Infinite : 1
1-20.	DC Power Requirement [Voltage Range] [Power Consumption]	 +24 / +48 VDC (+18 to +60 VDC) 65 W typ. @ No IF signal 69 W typ., 75 W max. @ Pout = +40 dBm
1-21.	Mute	Shut off the HPA in case of L.O. unlocked or no 10 MHz reference signal. * Note2
1-22.	LED Indicator	GREEN: L.O. locked RED: L.O. unlocked (or no 10 MHz reference signal)

*Note2: In case of FSK communications M&C model, the unit will operate until status of over temperature which turn out at internal temperature of around 120 °C, and the Mute and Alarm will function at status of over temperature. After the Mute and Alarm of over temperature, the unit will automatically recover at internal temperature of around 75 °C.

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#	Items	Specifications
1-23.	Monitor and Control <FSK Communication M&C> [Interface] [Functions] [Performance]	 650kHz FSK Signal on IF Connector Monitor: Tx Output Power / Temperature / Tx Status / Alarm (Over temperature * Note 1 / L.O. unlock) Control: Transmit On/Off Tx Output Power: Detector Range: 15 dB (up to P1dB) Reading Accuracy: +/- 1.0 dB ** Details are mentioned on Appendix of "Monitor & Control Specifications for FSK Communications Interface".*

* Note2: In case of FSK communications M&C model, the unit will operate until status of over temperature which turn out at internal temperature of around 120 °C, and the Mute and Alarm will function at status of over temperature. After the Mute and Alarm of over temperature, the unit will automatically recover at internal temperature of around 75 °C.

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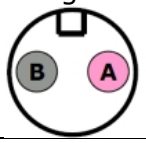
2. Mechanical Specifications

#	Items	Specifications
2-1.	Input Interface [IF Connector] [DC Input]	 IF / Ref. / FSK M&C Signal Input : N-type, female, 50 ohms F-type, female, 75 ohms IF Connector or MS Connector * Note3 - MS connector - Model: MS3102E 12S-3P Mating connector: MS3106E 12S-3S Assignment:  **Pin A: Prime (+24/+48VDC)** **Pin B: Prime Return**
2-2.	Output Interface	Waveguide, CPR-137 with Groove
2-3.	Dimension & Housing	219.5 (L) x 175 (W) x 99 (H) mm [8.64” (L) x 6.89” (W) x 3.90” (H)]
2-4.	Weight	3.2 kg typ., 3.3 kg max. [7.0 lbs typ., 7.3 lbs max.]

*Note3: MS Connector models are available to apply DC voltage via either MS Connector or IF Connector.

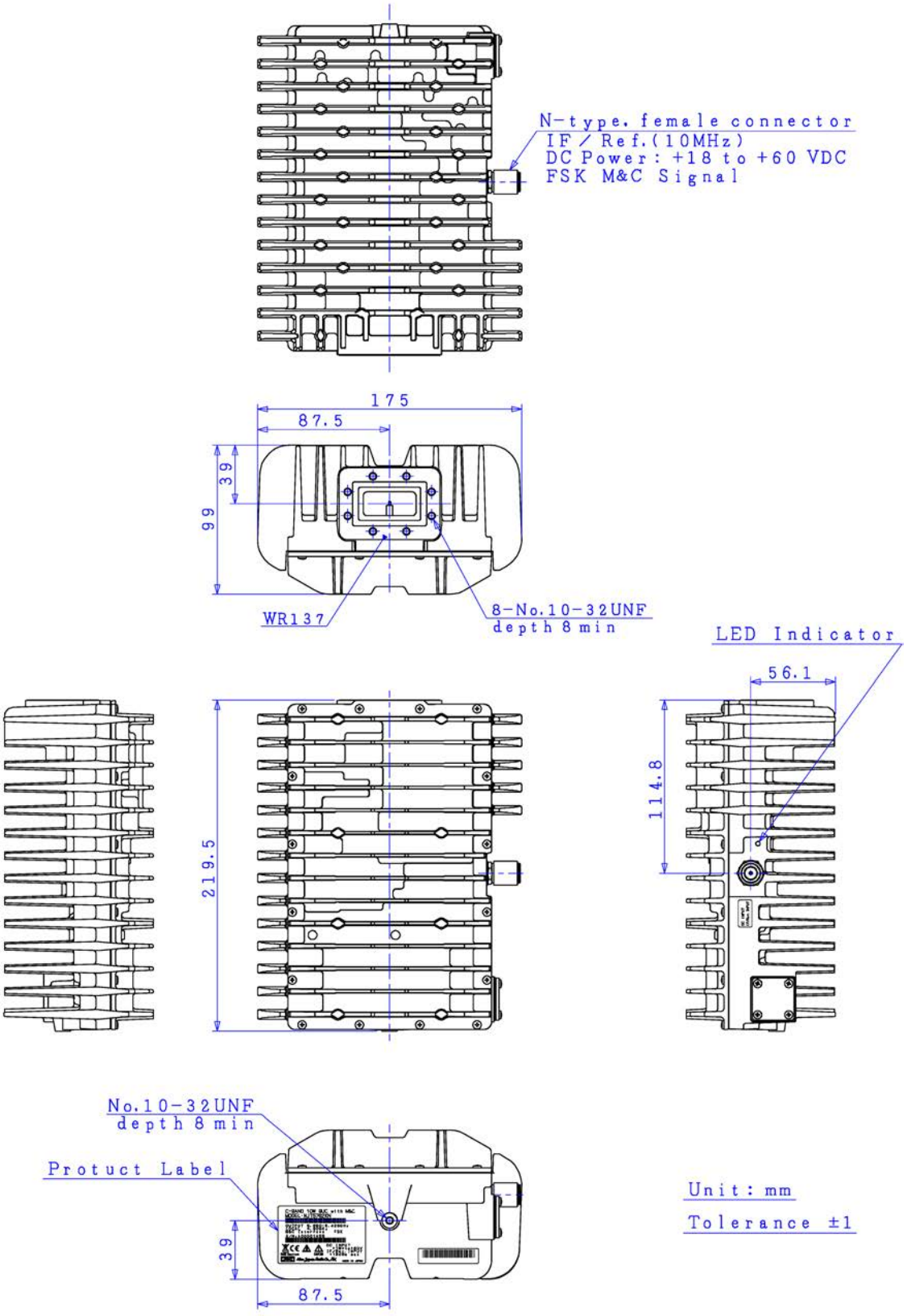
3. Environmental Specifications

#	Items	Specifications
3-1.	Temperature Range (ambient)	-40 to +55 °C (operating) -40 to +75 °C (storage)
3-2	Humidity	0 to 100 %
3-3.	Altitude	15,000 feet
3-4.	Vibration	5 G [49.03 m/s^2] (3 axis, 50 Hz to 2 kHz) 1 mm p-p (3 axis, 5 to 50 Hz)
3-5.	Shock	30 G [294.20 m/s^2] (3 axis)
3-6	Waterproof / Dustproof (IP Code)	IP 67
3-7.	Regulations	EU Directive (CE Marking) EMC (2004/108/EC) RoHS (2011/65/EU) Safety: EN60950-1
3-8.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

* Above Specifications are subject to change without notice.

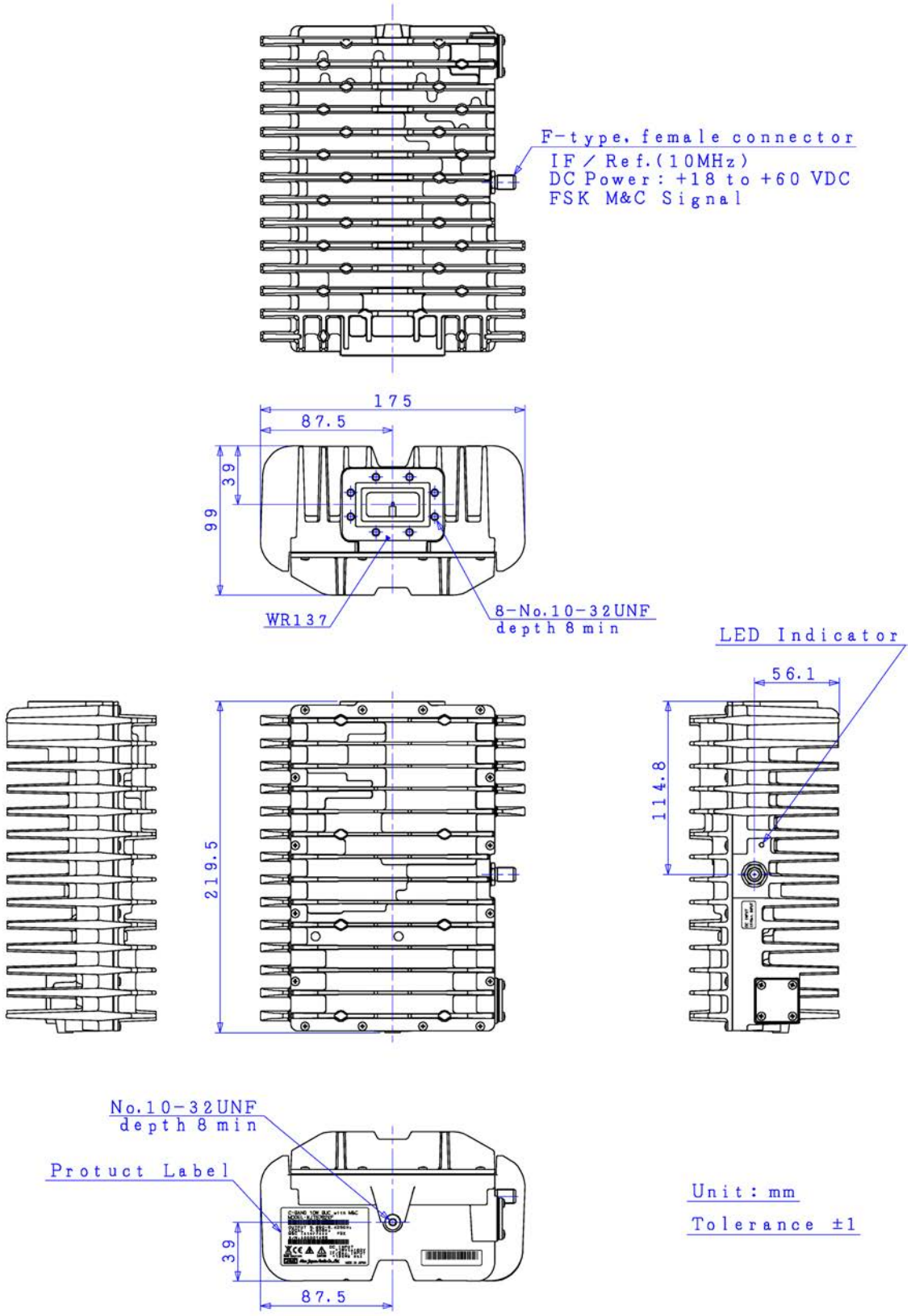
4. Outline Drawing

- IF / Ref. Input: N-type Female Connector
- DC Input: IF Connector



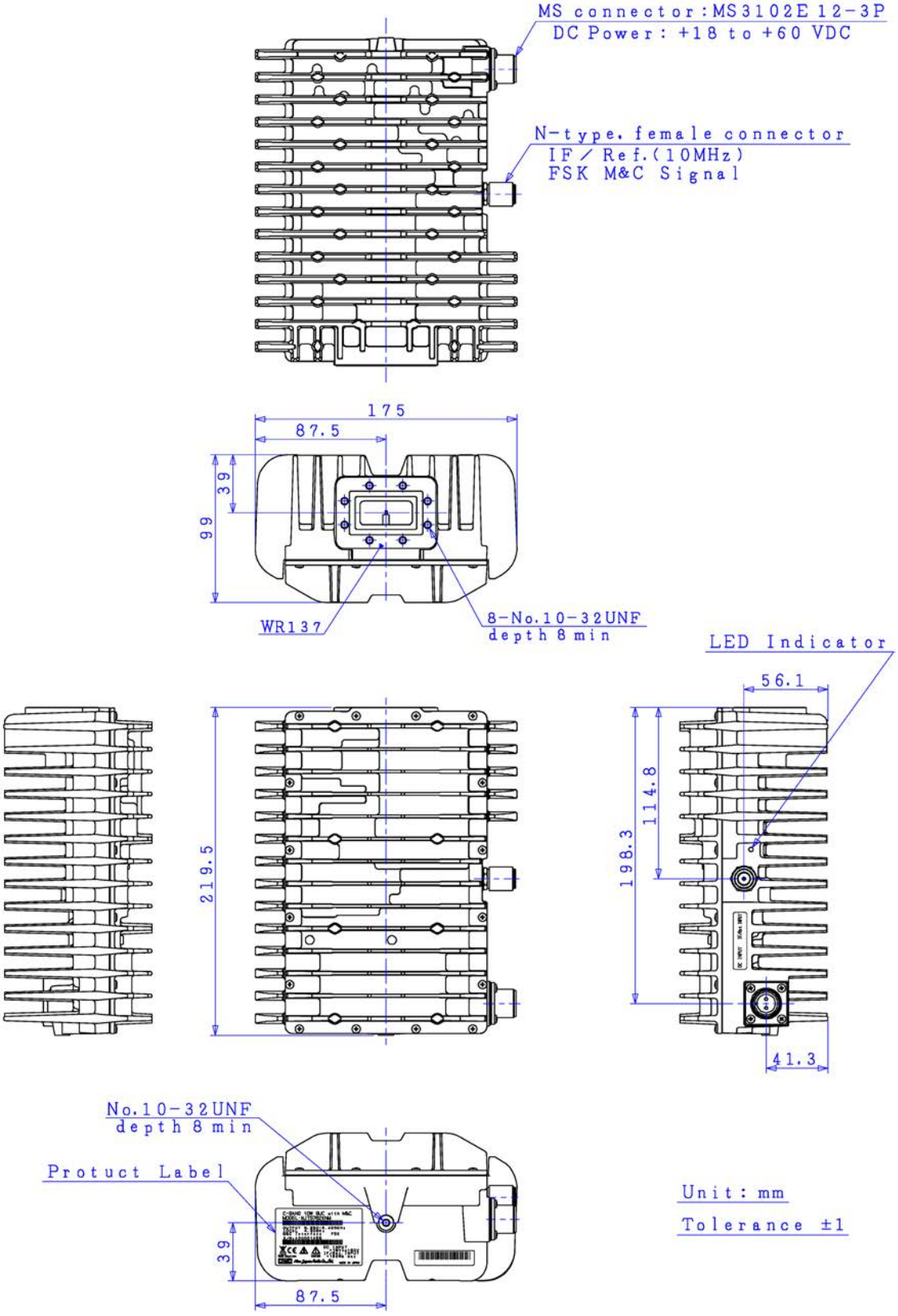
* Above Specifications are subject to change without notice.

- IF / Ref. Input: F-type Female Connector
- DC Input: IF Connector



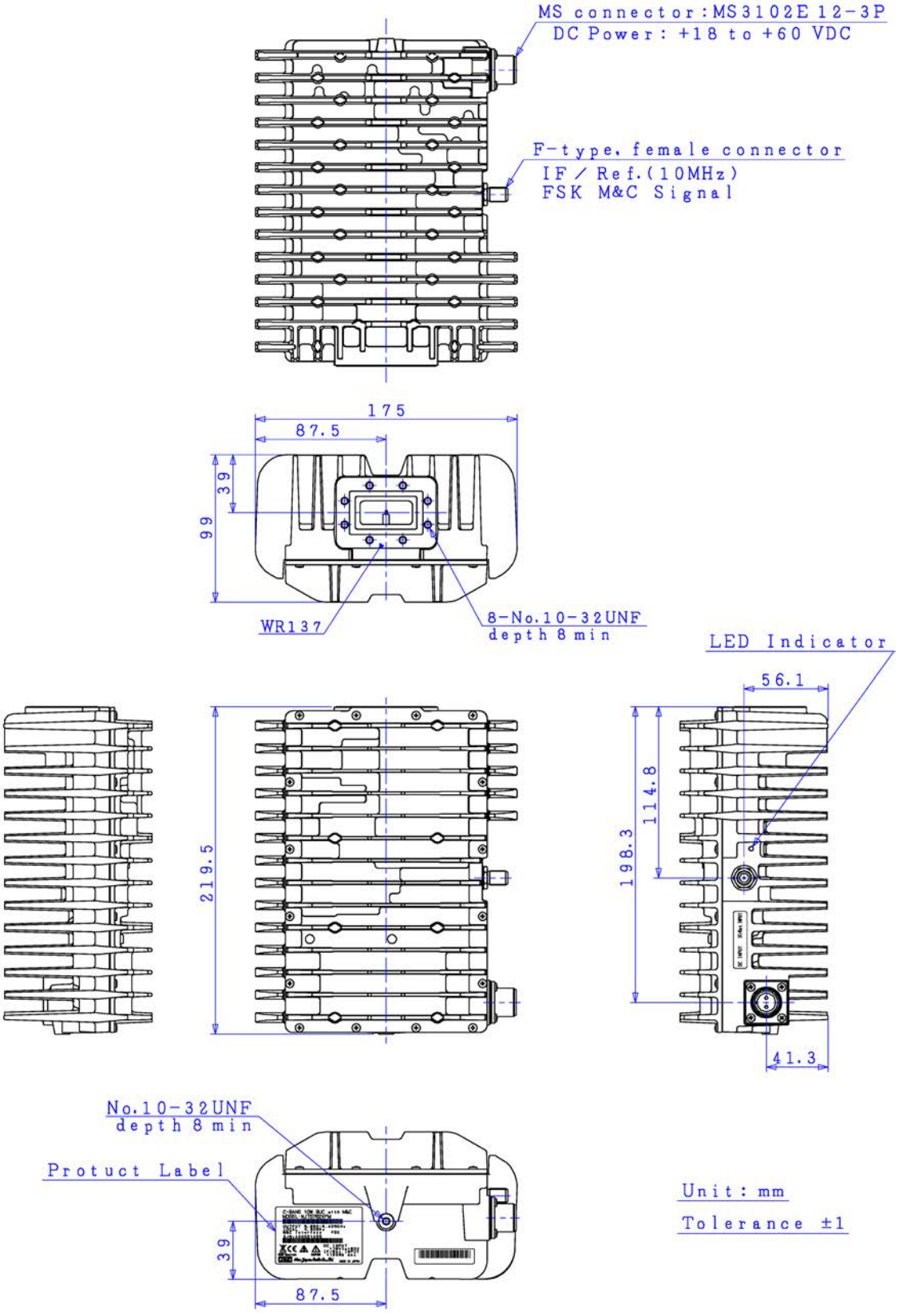
* Above Specifications are subject to change without notice.

- IF / Ref. Input: N-type Female Connector
- DC Input: MS Connector



* Above Specifications are subject to change without notice.

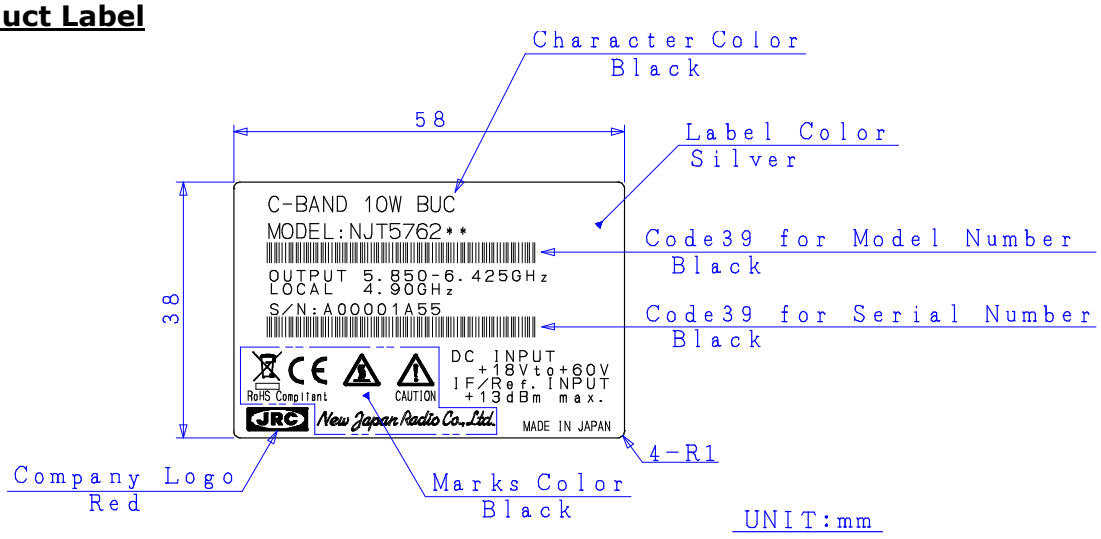
- IF / Ref. Input: F-type Female Connector
- DC Input: MS Connector



* Above Specifications are subject to change without notice.

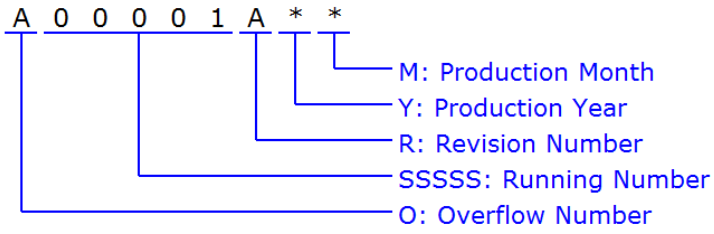
5. Label

Product Label



Definition of Serial Number

Serial Number (OSSSSSRYM) - ALPHANUMERIC (9 characters)



O: Overflow Number - ALPHABET (1 character)
"A" to "Z", e.g.: A99999 ⇒ B00001

SSSSS: Running Number - NUMBER (5 digits)
"00001" to "99999"

R: Revision Number - ALPHABET (1 character)
"A" to "Z"

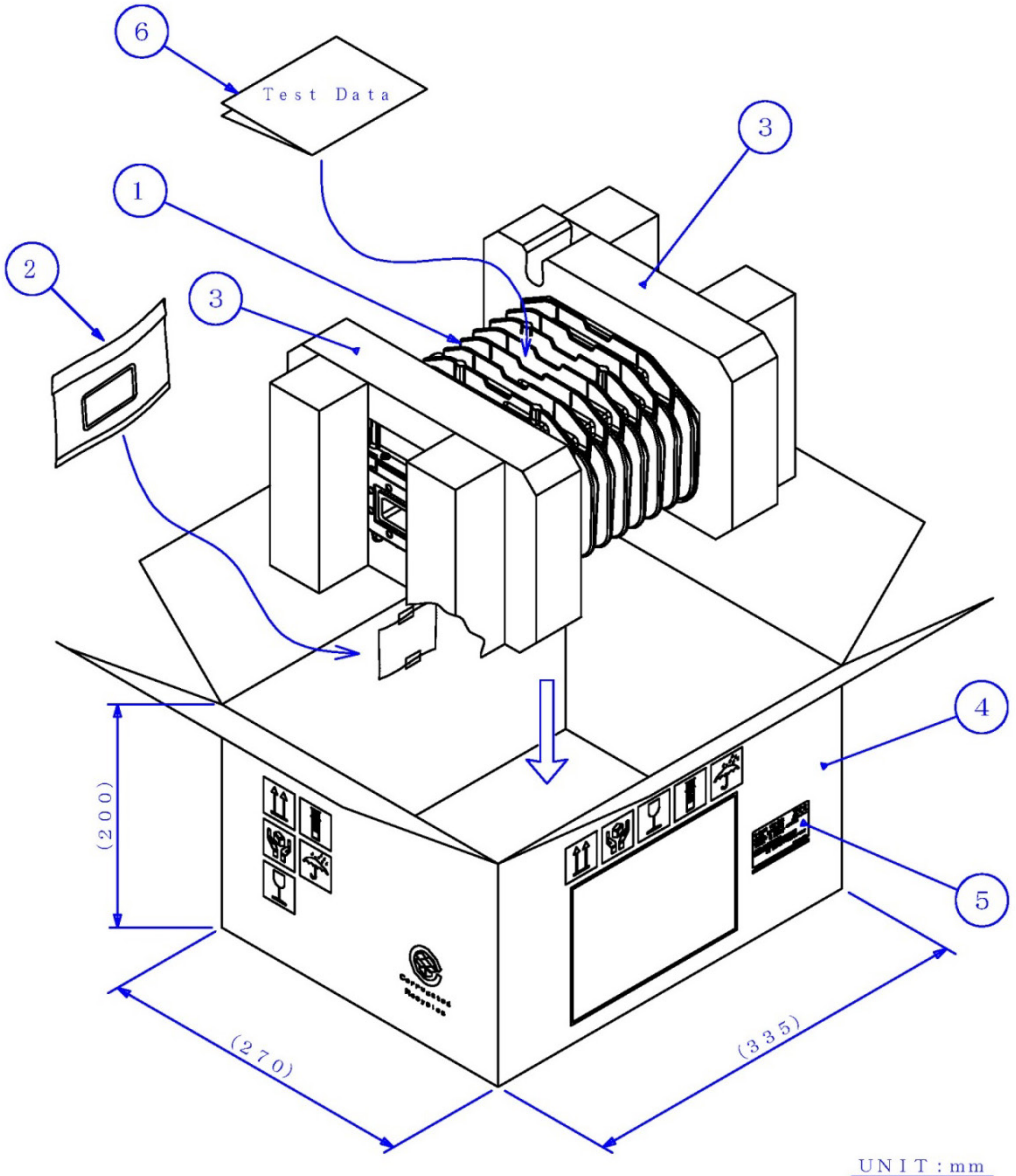
Y: Production Year - NUMBER (1 digit)
Calendar Number, e.g.: 2009:9, 2010:0, 2011:1, 2012:2 ····

M: Production Month - ALPHANUMERIC (1character)
"1" to "9", "X" as October, "Y" as November, "Z" as December

* Above Specifications are subject to change without notice.

6. Package

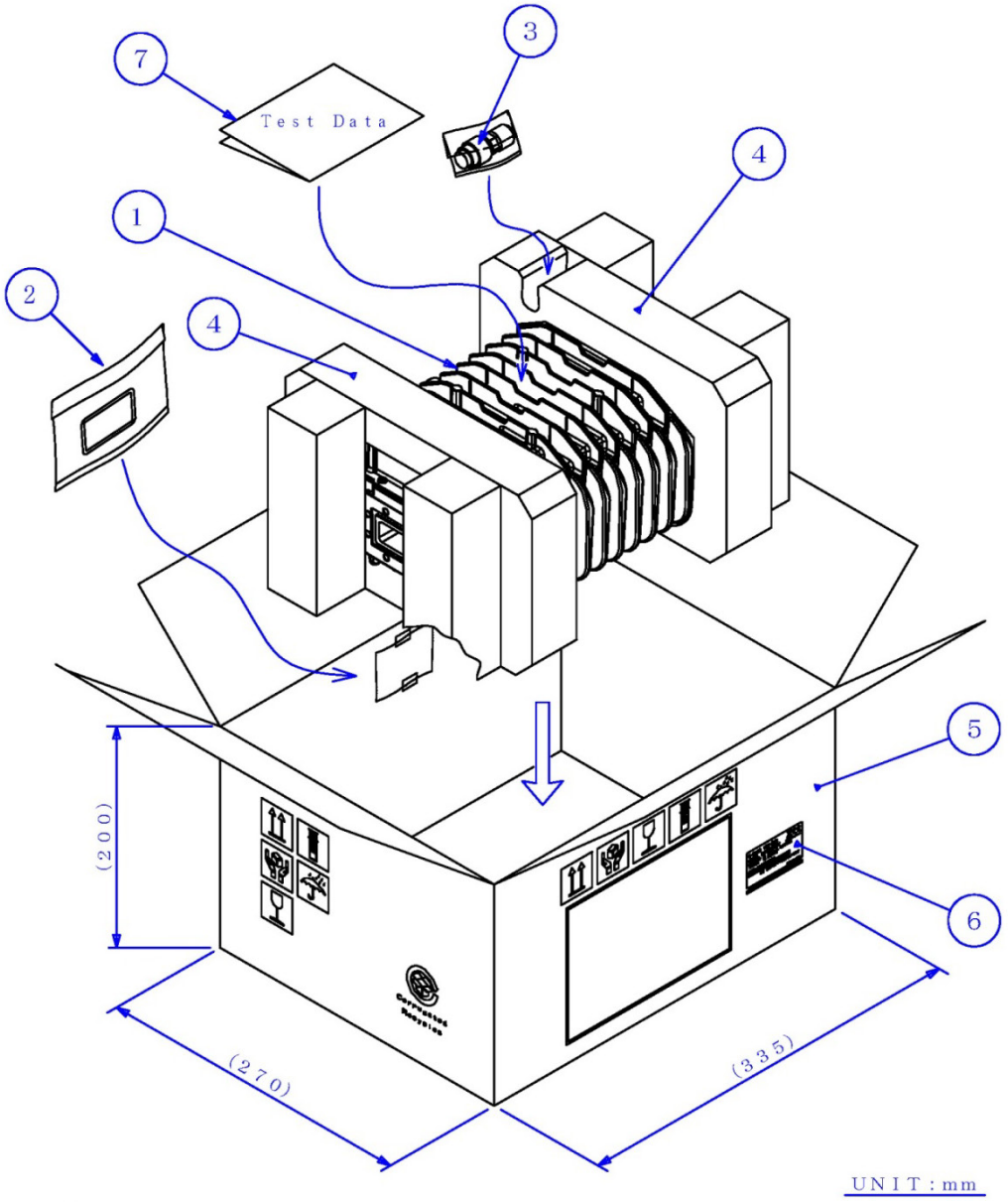
- Models of IF connector for DC Input



①:BUC
②:Accessories
・O-RING
③:Polyethylene Foam For Package Cushioning
④:Corrugated Fibreboard(Double Wall)
⑤:Label
⑥:Test Data

* Above Specifications are subject to change without notice.

- Models of MS connector for DC Input



①:BUC
②:Accessories
・O−RING
③:Accessory
・MS mating connector
④:Polyethylene Foam For Package Cushioning
⑤:Corrugated Fibreboard (Double Wall)
⑥:Label
⑦:Test Data

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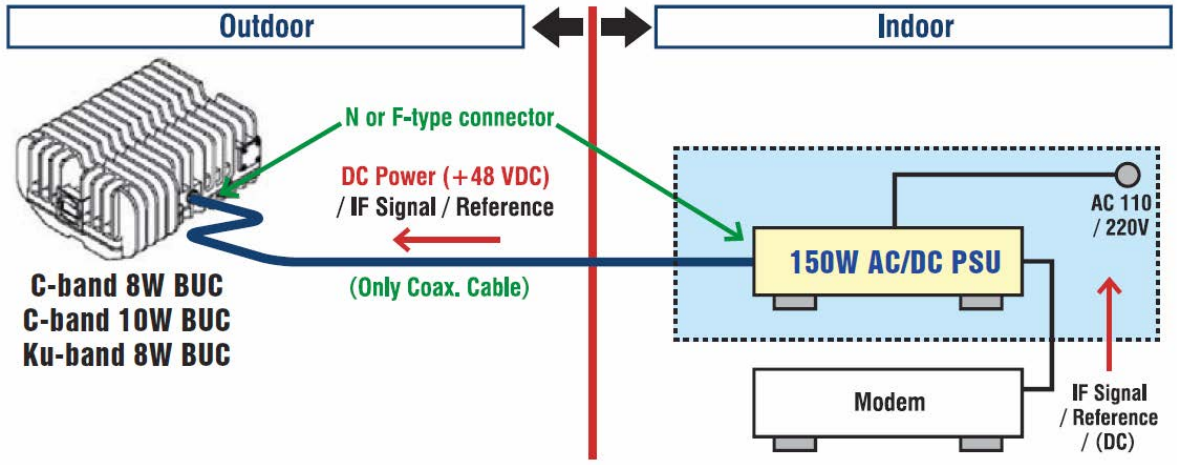
AC Power Operating Option

1. Overview

The power supply unit (PSU) provides a DC power to operate NJRC's Ku-band 8W BUCs (NJT5118, NJT5218 and NJT8318 series) and C-band 10W BUCs (NJT5672, NJT5763 and NJT5764 series) via a coaxial cable.

The features are

- Indoor power supply unit with up to 150 W and +48 V DC power output.
- Regardless of Any Types of Modem.
- DC power output can be turned on/off by mechanical switch on the front panel.
- The mode of DC power output can be selected out of in the following mode options by DIP switch on the front panel.
  - Option 1: To keep supplying DC power regardless of modem output status
  - Option 2: To control power DC output on/off by synchronization of input DC voltage on/off from modem
- Directly connect the coaxial cable for IF signal, 10 MHz reference and DC power from modem.
- One Coaxial Cable Solution.
- Compatible with 1U rack-mount.



* Above Specifications are subject to change without notice.

AC Power Operating Option

2. Electrical Specifications

#	Items	Specifications
2-1.	Input AC Voltage Range [Rated Range] [Absolute Maximum Rating]	 100 to 240 VAC 90 to 264 VAC
2-2.	Input AC Frequency Range	50/60 Hz
2-3.	Maximum Input AC Apparent Power	200 VA
2-4.	Output Voltage	+48 VDC
2-5.	Output Voltage Accuracy	+/- 10 %
2-6.	Output Current Range	0 to 3.2 A
2-7.	Maximum Output Power	150 W
2-8.	Standby Mode Power ・ No Connect BUC ・ Non DC Power Output	10 W max.
2-9.	Efficiency	80 % typ. at 120 VAC, full load
2-10.	Power Factor	0.98 typ. at 120 VAC, full load
2-11.	Output ON/OFF Control	・ Rocker Switch on the Front Panel ・ Mode of DC Power Output Option 1: To keep supplying Option 2: Synchronization with input DC voltage on/off
2-12.	IF Frequency Range	950 to 1,700 MHz
2-13.	IF Input/ Output Impedance	
	< N-type Model >	50 ohms nom.
	< F-type Model >	75 ohms nom.
2-14.	IF Input/ Output VSWR	2 : 1 max.
2-15.	IF Insertion Loss	1.5 dB max.
2-16.	Input DC Voltage Range at IF Input Interface	+24 / +48 VDC In case of option 2 in mode of DC power output, 50mA min. is needed from modem.
2-17.	Protection	・ Internal Primary Current Fuse ・ Short Protection
2-18.	LED Indicator [DC Output (Power)] [Fan Alarm]	 GREEN: Supply a DC Power to BUC GREEN: Normal Condition RED: Abnormal Condition and must be Replacement

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AC Power Operating Option

3. Mechanical Specifications

#	Items	Specifications
3-1.	AC Input Interface	IEC320-C14 inlet
3-2.	IF Input Interface	
	< N-type Model >	N-type, female (50 ohms)
	< F-type Model >	F-type, female (75 ohms)
3-3.	IF Output Interface	
	< N-type Model >	N-type, female (50 ohms)
	< F-type Model >	F-type, female (75 ohms)
3-4.	Cooling	Forced Air by Fan
3-5.	Dimension & Housing without Interface and Switch	(W) 290 x (D) 200 x (H) 44 mm [(W) 11.42" x (D) 7.87" x (H) 1.73"]
3-6.	Weight	1.6 kg [3.5 lbs]

4. Environmental Specifications

#	Items	Specifications
4-1.	Temperature Range (ambient)	
	[Operating]	0 to +50 °C
	[Storage]	-30 to +85 °C
4-2.	Humidity	
	[Operating]	30 to 90 %Rh non-condensing
	[Storage]	10 to 95 %Rh
4-3.	Vibration	Non Operation 19.6 m/s^2 Constant (10 to 55 Hz,Sweep time:1min., 3 axis,1hr)
4-4.	Shock	20 G [196.1 m/s^2] (3 axis)
4-5.	Compliance Standard	EN55022 EN55024 EN61000-3-2/3 EN60950-1 / UL60950-1 EN62311
4-6.	Regulations	EU Directive (CE Marking) EMC (2004/108/EC) Low Voltage (2006/95/EC) UL Citification
4-7.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

5. Accessories

- AC power cable of 2 m (with 3 pins American plug) , Qty (1)
- Coaxial cable of 1 m (Option)
- 1U rack-mount kit (Option)

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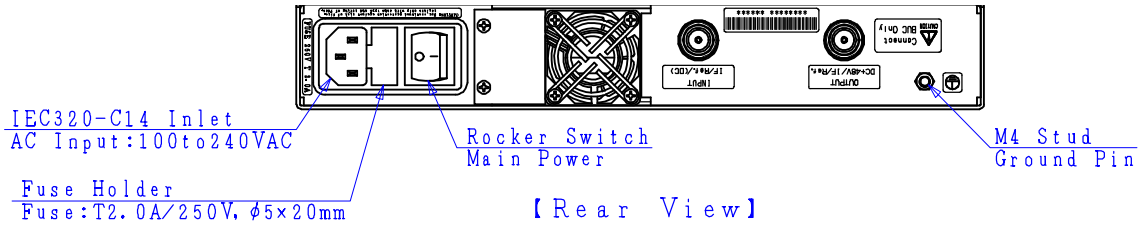
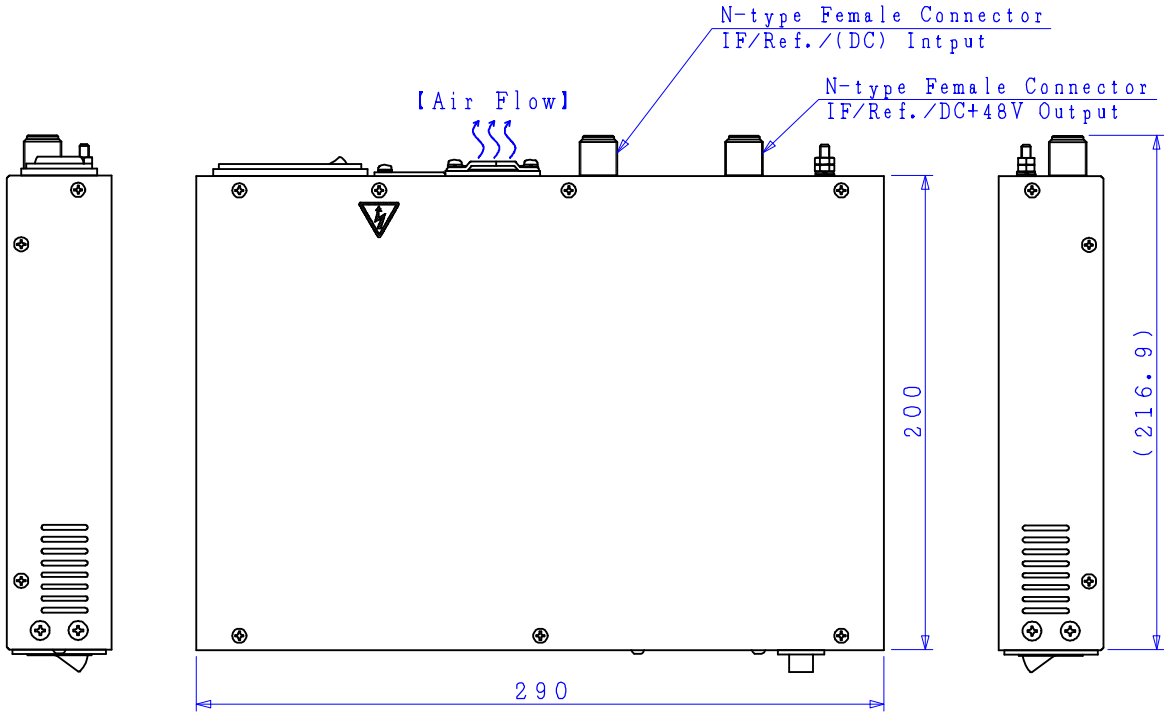
AC Power Operating Option

6. Outline Drawing

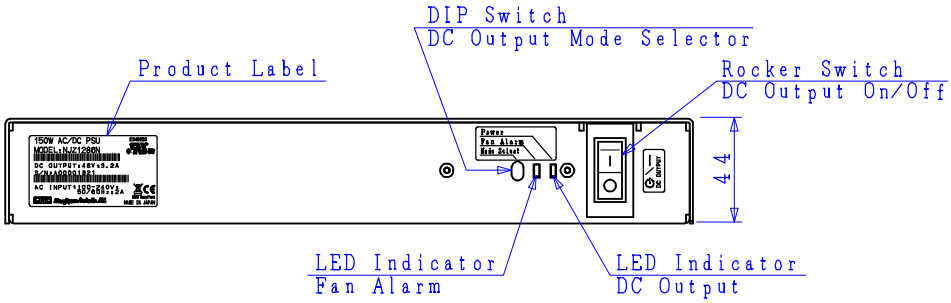
- IF Interface : N-type Female Connector



【Rear View】



【Top View】



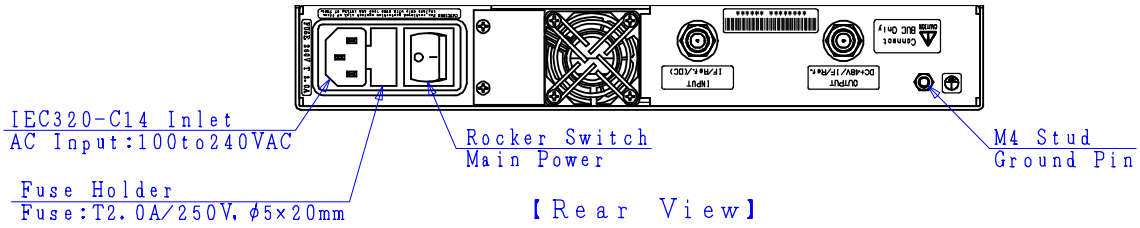
【Front View】

UNIT : mm

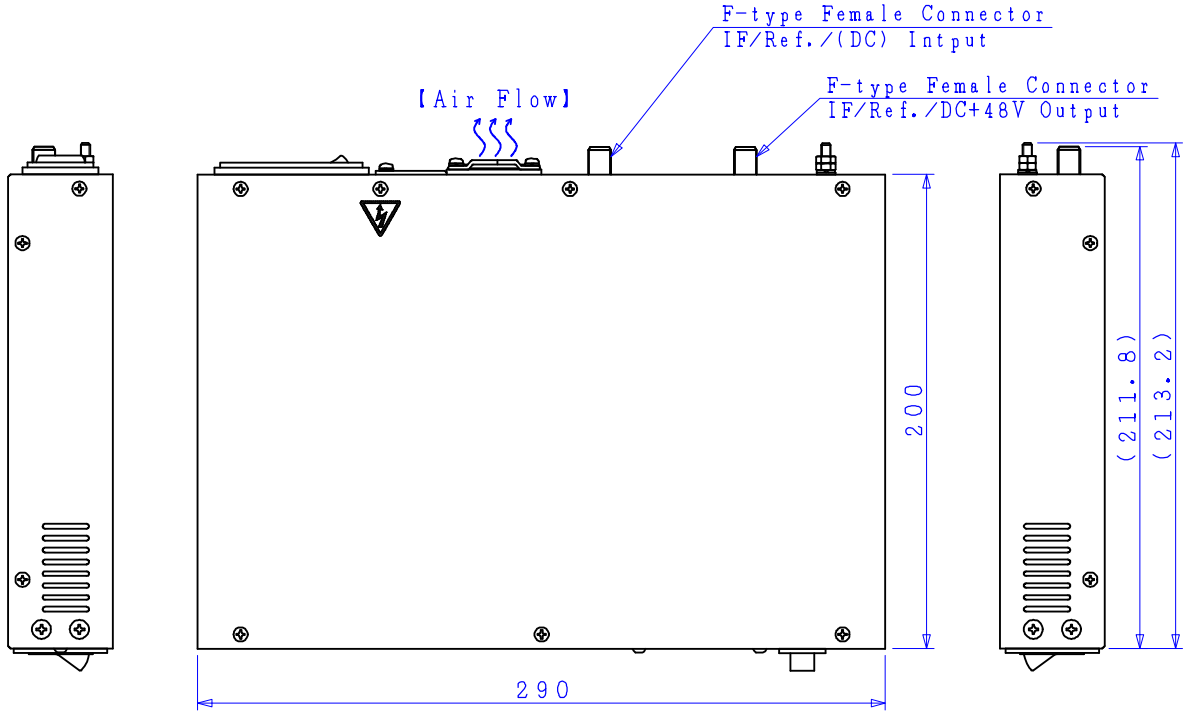
* Above Specifications are subject to change without notice.

AC Power Operating Option

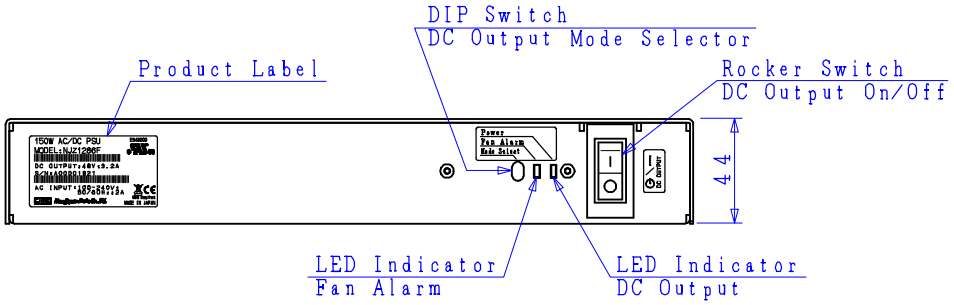
- IF Interface : F-type Female Connector



【Rear View】



【Top View】



【Front View】

UNIT : mm

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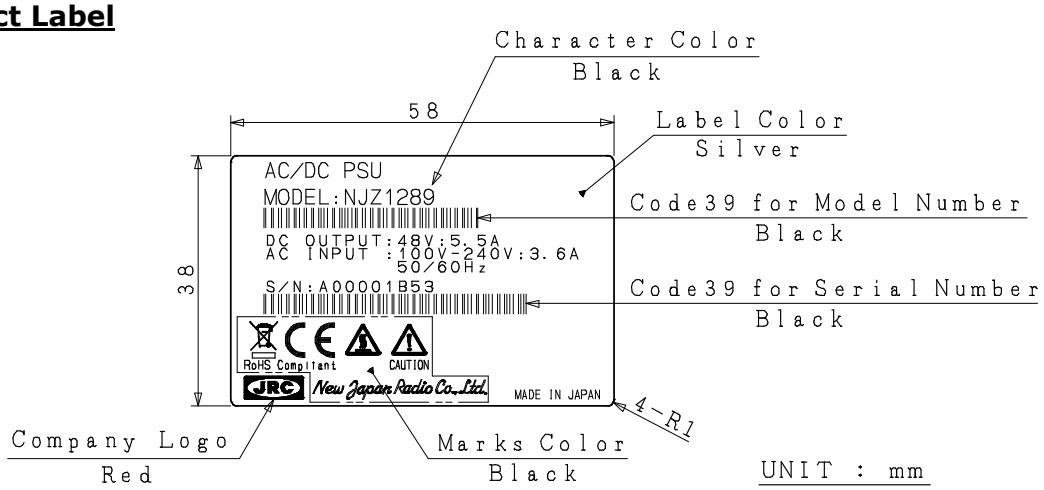
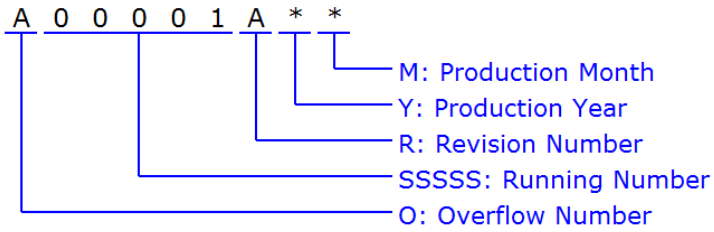
7. Label

Product Label



Definition of Serial Number

Serial Number (OSSSSSRYM) - ALPHANUMERIC (9 characters)



O: Overflow Number - ALPHABET (1 character)
"A" to "Z", e.g.: A99999 ⇒ B00001

SSSSS: Running Number - NUMBER (5 digits)
"00001" to "99999"

R: Revision Number - ALPHABET (1 character)
"A" to "Z"

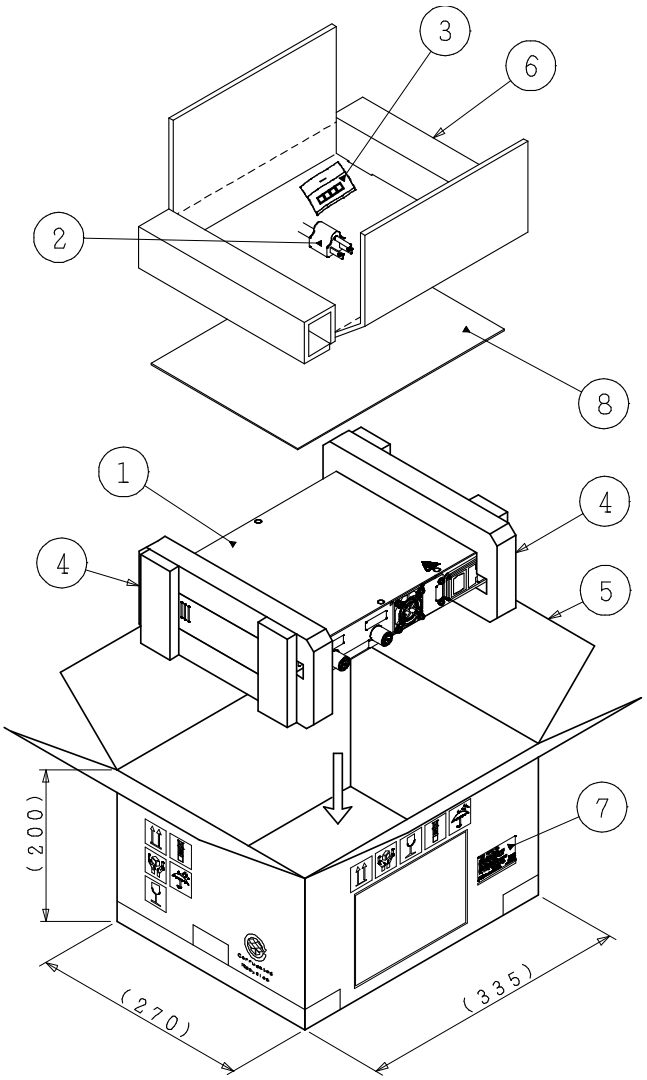
Y: Production Year - NUMBER (1 digit)
Calendar Number, e.g.: 2009:9, 2010:0, 2011:1, 2012:2 ····

M: Production Month - ALPHANUMERIC (1character)
"1" to "9", "X" as October, "Y" as November, "Z" as December

* Above Specifications are subject to change without notice.

8. Package

Package for PSU



Pictorial Marking for handling of Goods

- THIS WAY UP
- HANDLE WITH CARE
- FRAGILE
- LAYERS LIMIT:5
- KEEP DRY

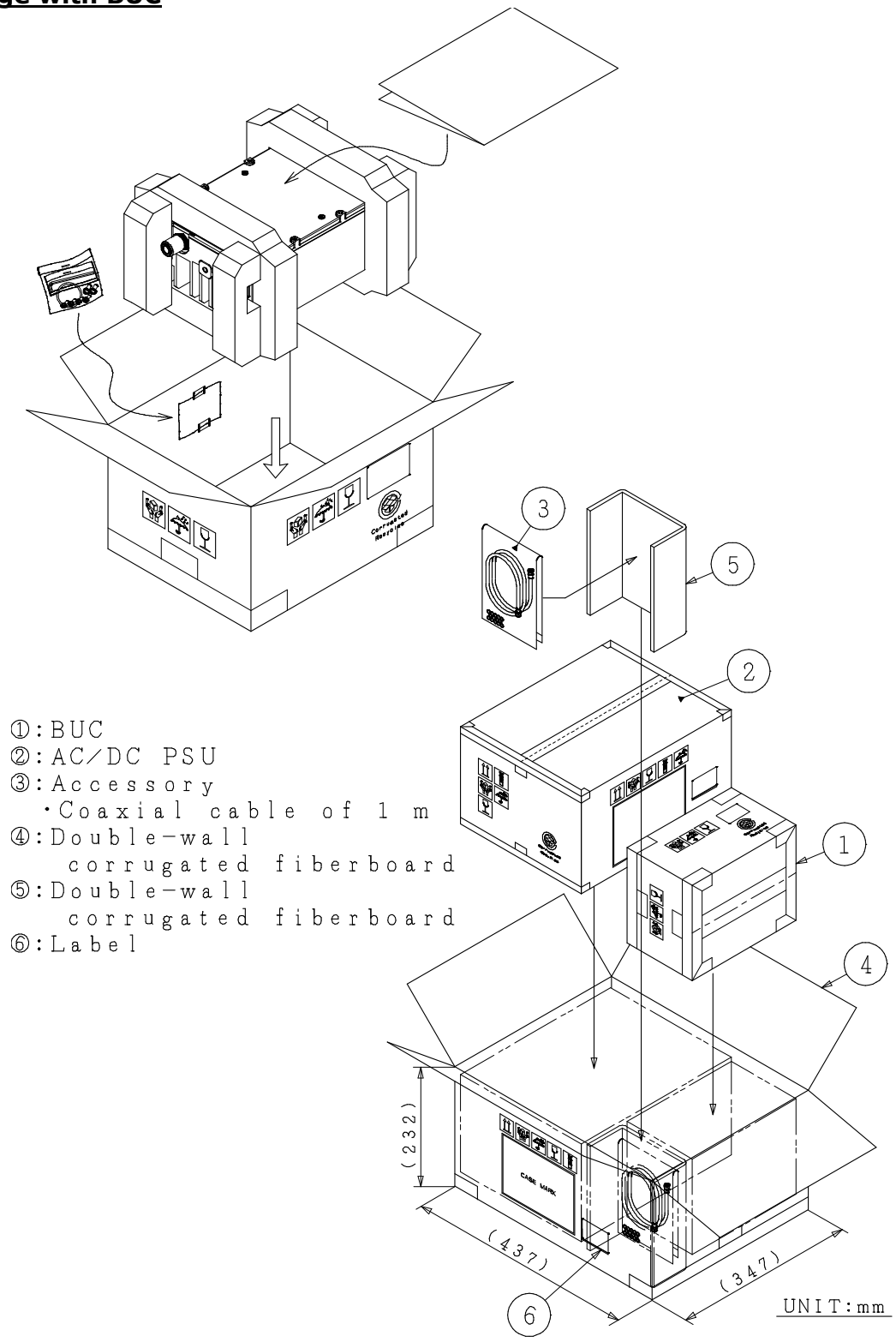
①:150W AC/DC PSU
②:Accessory
・AC power cable of 2m
③:Accessory
・Cushioning pad(4 pieces)
④:Polyethylene Foam For Package Cushioning
⑤:Corrugated Fiberboard(Double Wall)
⑥:Corrugated Fiberboard(Single Wall)
⑦:Label
⑧:User's Manual

UNIT:mm

* Above Specifications are subject to change without notice.

AC Power Operating Option

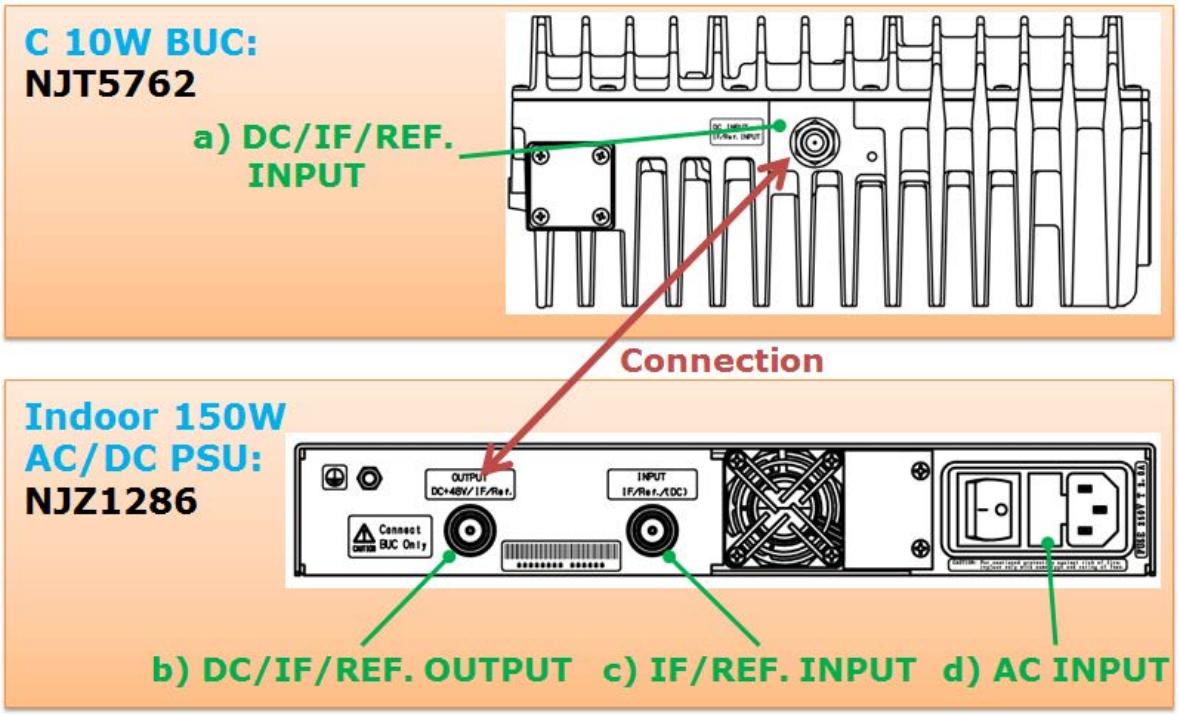
Package with BUC



* Above Specifications are subject to change without notice.

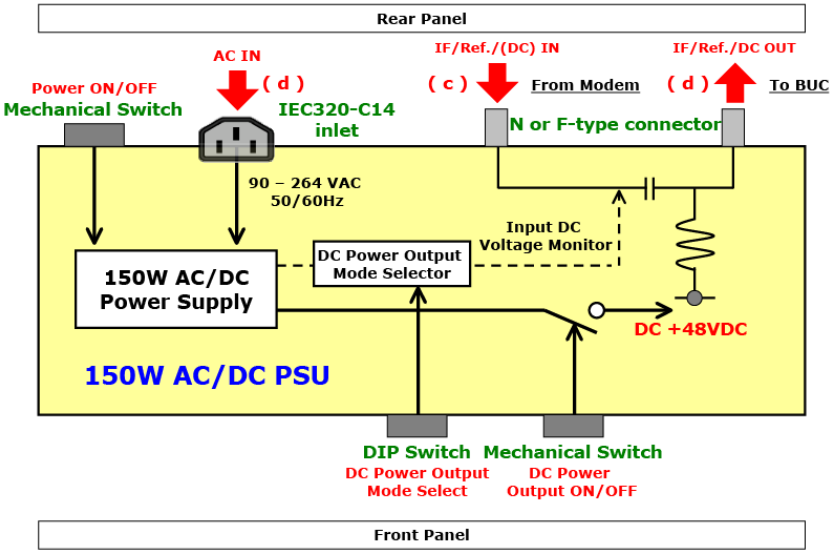
AC Power Operating Option

9. Connection Overview between C 10W BUC and 150W AC/DC PSU



10. Basic Operation

Diagram



1) Main power can be turned on/off by mechanical switch on the rear panel.
2) DC power output can be turned on/off by mechanical switch on the front panel.
3) DC power output mode can be selected by customer in following two mode options by DIP switch on the front panel.
   Option 1: Possible always to supply DC power regardless of Modem output status.
   Option 2: Possible to control power DC output on/off by synchronization of input DC voltage on/off from modem.

* Above Specifications are subject to change without notice.