

Standard Ku-band 8W BUC

RF Frequency: 14.0 to 14.5 GHz

Model No. NJT5118N

IF / Ref. (10MHz) / DC Power Input: N-type Female Connector

Model No. NJT5118F

IF / Ref. (10MHz) / DC Power Input: F-type Female Connector

Model No. NJT5118NM

IF / Ref. (10MHz) Input: N-type Female Connector
DC Power Input: MS Connector

Model No. NJT5118FM

IF / Ref. (10MHz) Input: F-type Female Connector
DC Power Input: MS Connector

Specifications

Rev.09 March 15, 2012

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**New Japan Radio Co., Ltd.
Microwave Components Division**

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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.
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 - * 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
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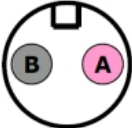
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1. Electrical Specifications

1-1.	Output Frequency Range	14.0 to 14.5 GHz
1-2.	Input Frequency Range	950 to 1,450 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	13.05 GHz
1-6.	Frequency Sense	Positive
1-7.	Output Power @ 1dB G.C.P.	+39 dBm min. over temperature
1-8.	Linear Gain	65 dB nom., 59 dB min.
1-9.	Gain Variation over frequency @ fixed temperature	4 dBp-p max. over 500 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., -24 dBc max. @ total power ≤ +39 dBm - 3 dB
1-12.	ACPR	-28 dBc typ. @ Pout = +38 dBm Compliance with IESS308 / SSOG 308
1-13.	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
1-14.	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
1-15.	Spurious [in band] [in receive and] [Out-of-band]	-50 dBc max. @ 14.0 to 14.5 GHz -70 dBm max. @ 10.95 to 12.75 GHz -50 dBc max. @ Pout = +39 dBm
1-16.	Receive Band Noise Density	-156 dBm/Hz max. @10.95 to 12.75 GHz
1-17.	Noise Figure	13 dB nom., 20 dB max.
1-18.	Group Delay over any 54MHz	2.5 nS p-p max.
1-19.	Input Impedance <NJT5118N / NJT5118NM> <NJT5118F / NJT5118FM>	50 ohms nom. 75 ohms nom.
1-20.	Input V.S.W.R.	2 : 1 max
1-21.	Output V.S.W.R.	2 : 1 max.
1-22.	Output Load VSWR for Non Damage	Infinite : 1
1-23.	DC Power Requirement [Voltage Range] [Power Consumption]	+24 / +48 VDC (+18 to +60 VDC) 75 W typ. @ No IF signal 79 W typ., 90 W max. @ Pout = +39 dBm
1-24.	Mute	Shut off the HPA in case of L.O. unlocked or no 10 MHz reference signal.
1-25.	LED Indicator	GREEN: L.O. locked RED: L.O. unlocked (or no 10 MHz reference signal)

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2. Mechanical Specifications

2-1.	Input Interface	<NJT5118N> IF / Ref. / DC Power: N-type, female <NJT5118F> IF / Ref. / DC Power: F-type, female <NJT5118NM> IF / Ref.: N-type, female DC Power: MS connector <NJT5118FM> IF / Ref.: F-type, female DC Power: MS connector - 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, WR-75 (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.]

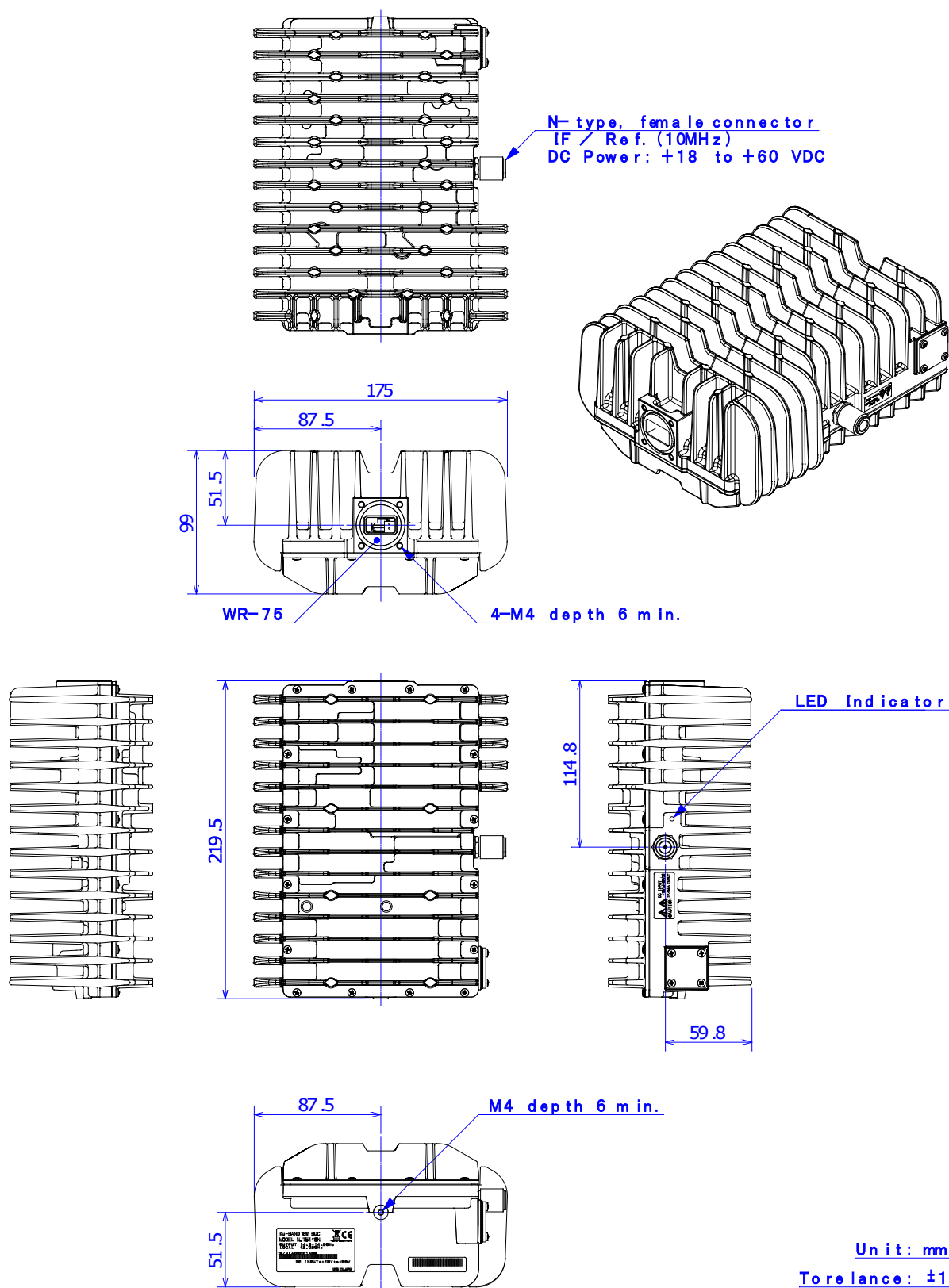
3. Environmental Specifications

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.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

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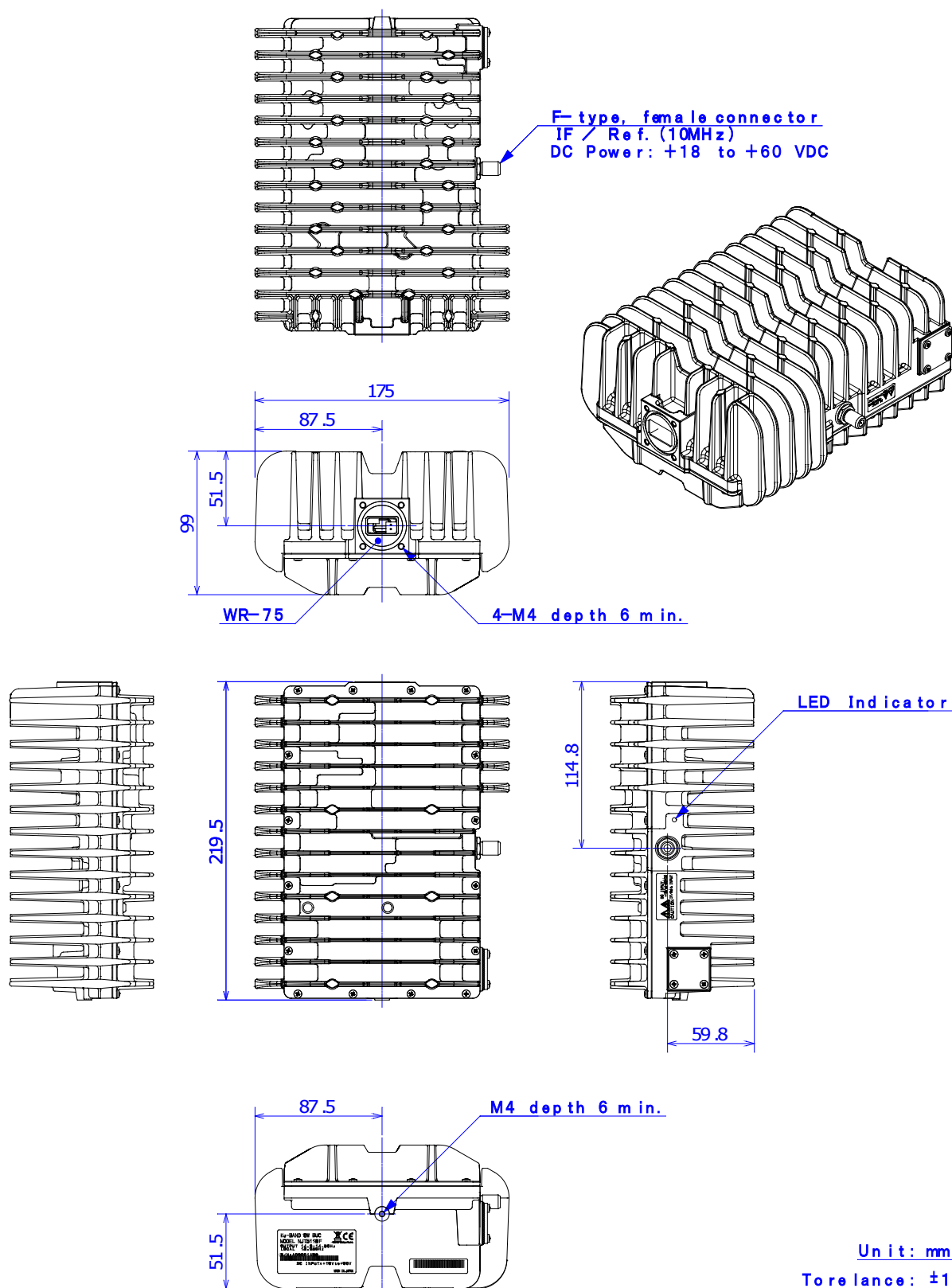
4. Outline Drawing

- NJT5118N: IF / Ref. / DC Power Input: N-type Female Connector



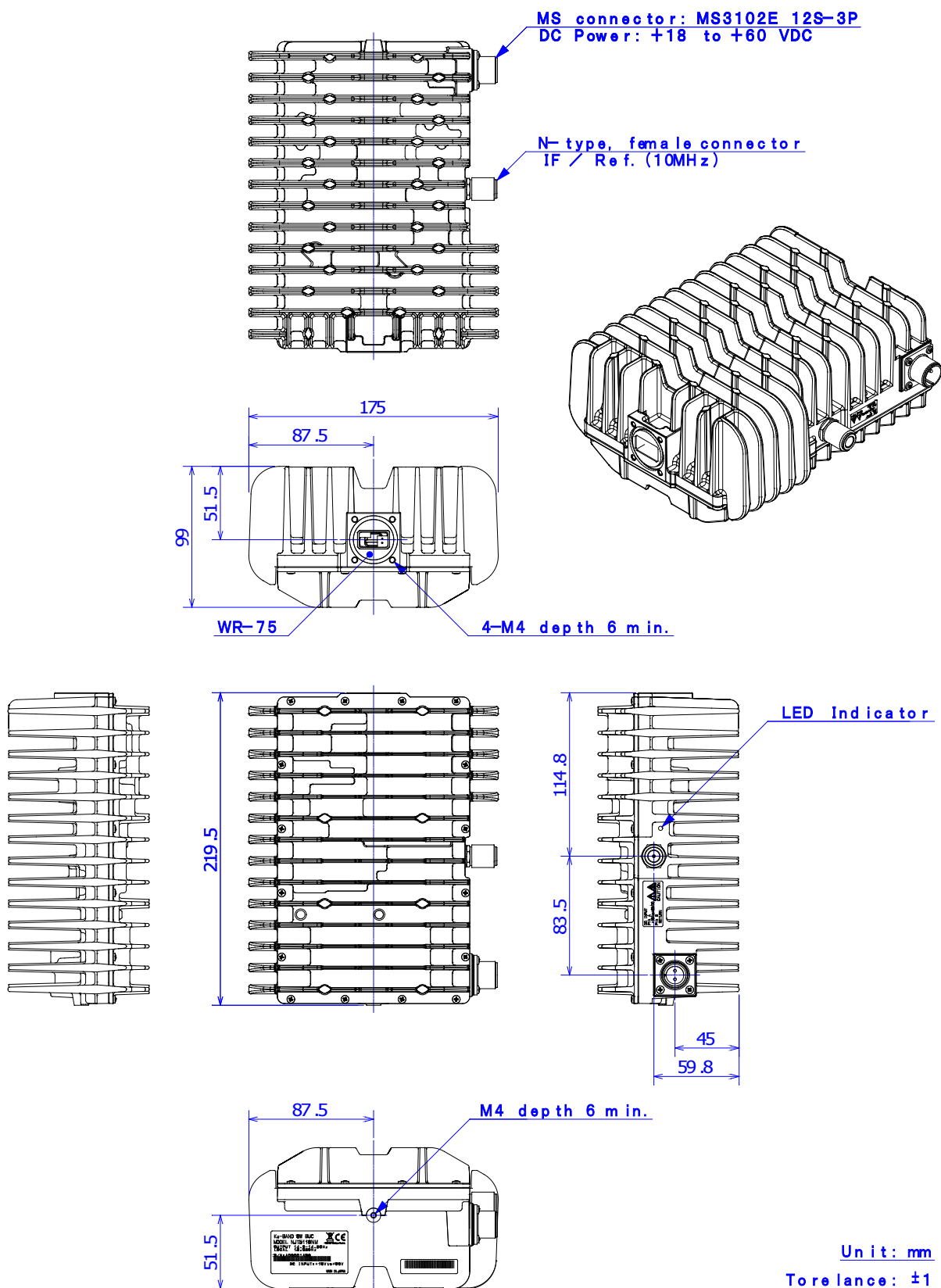
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- NJT5118F: IF / Ref. / DC Power Input: F-type Female Connector



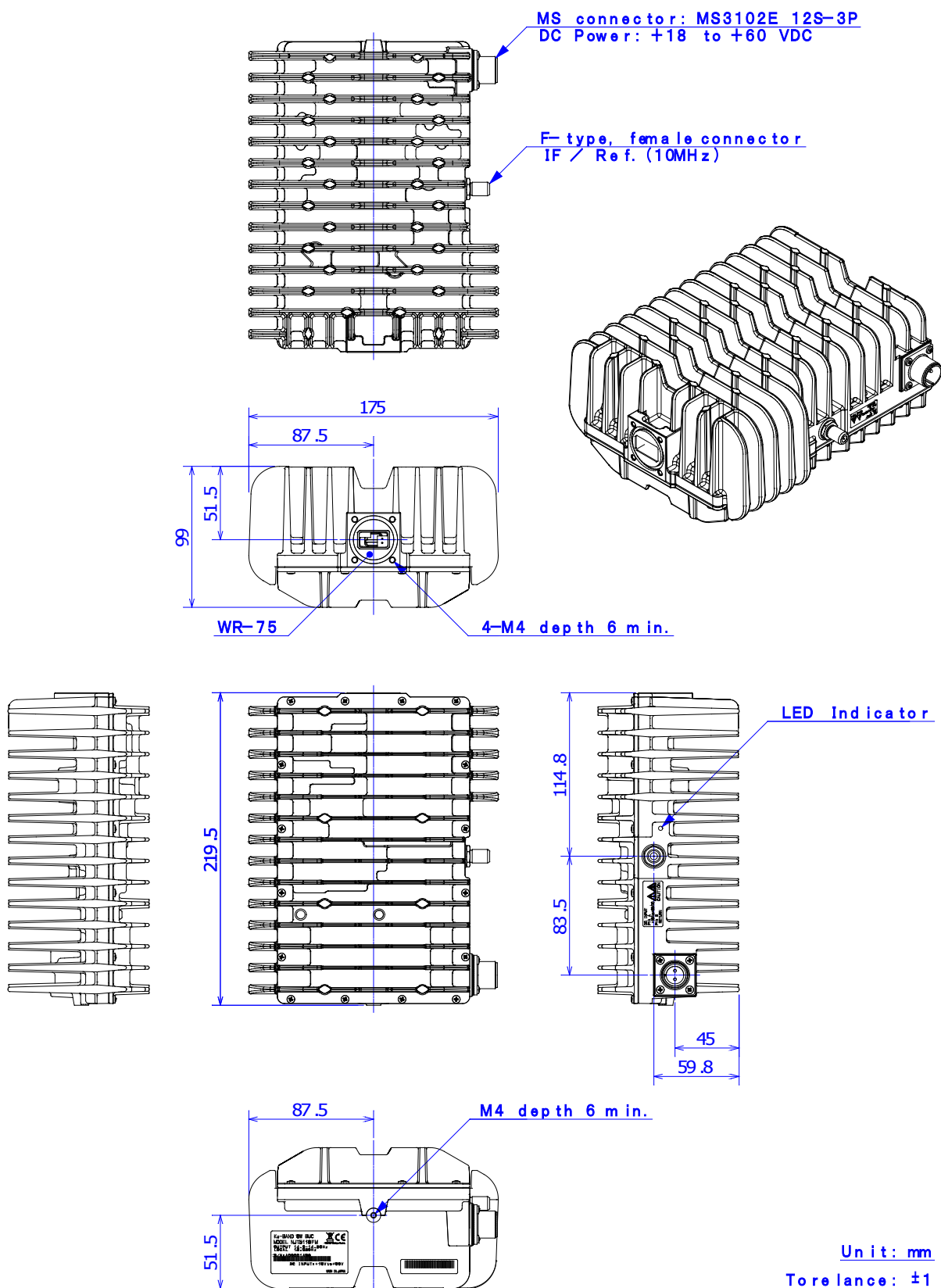
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- NJT5118NM: IF / Ref. Input: N-type Female Connector
DC Power Input: MS Connector



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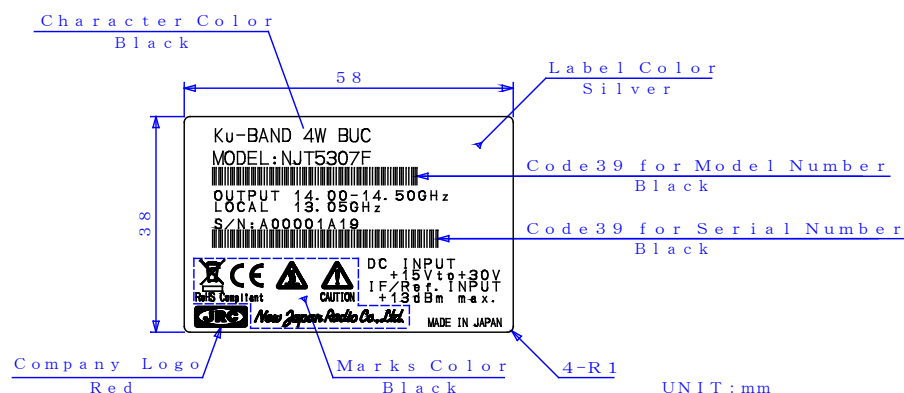
- NJT5118FM: IF / Ref. Input: F-type Female Connector
DC Power Input: MS Connector



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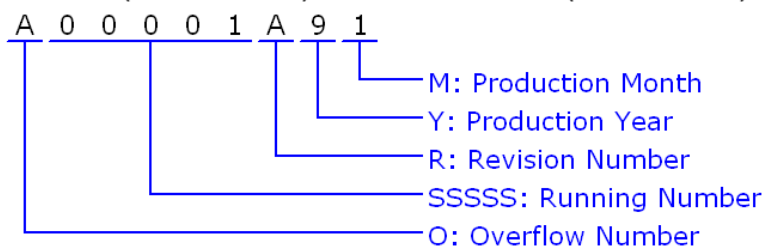
5. Label

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

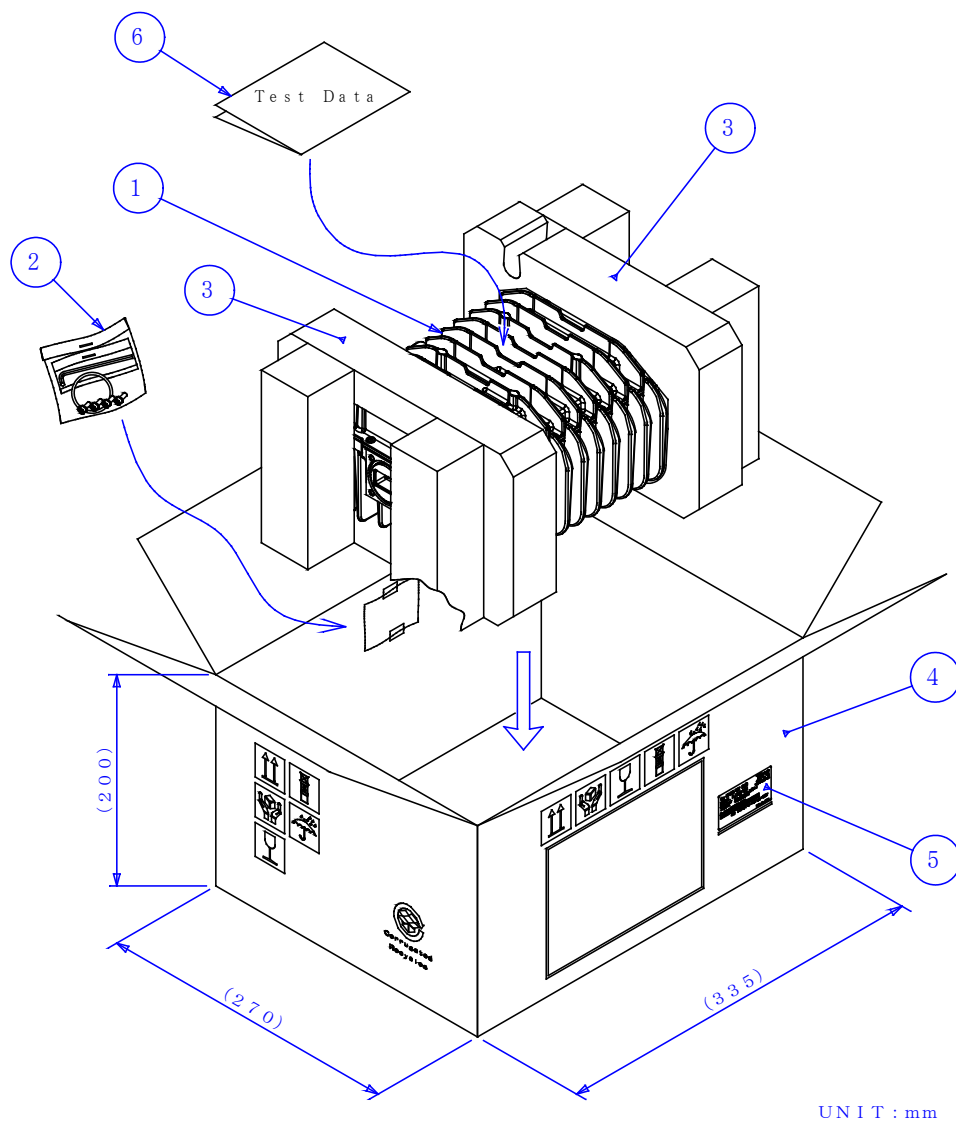
M: Production Month - ALPHANUMERIC (1character)

"1" to "9", "X" as October, "Y" as November, "Z" as December

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6. Package

- NJT5118N: IF / Ref. / DC Power Input: N-type Female Connector
- NJT5118F: IF / Ref. / DC Power Input: F-type Female Connector

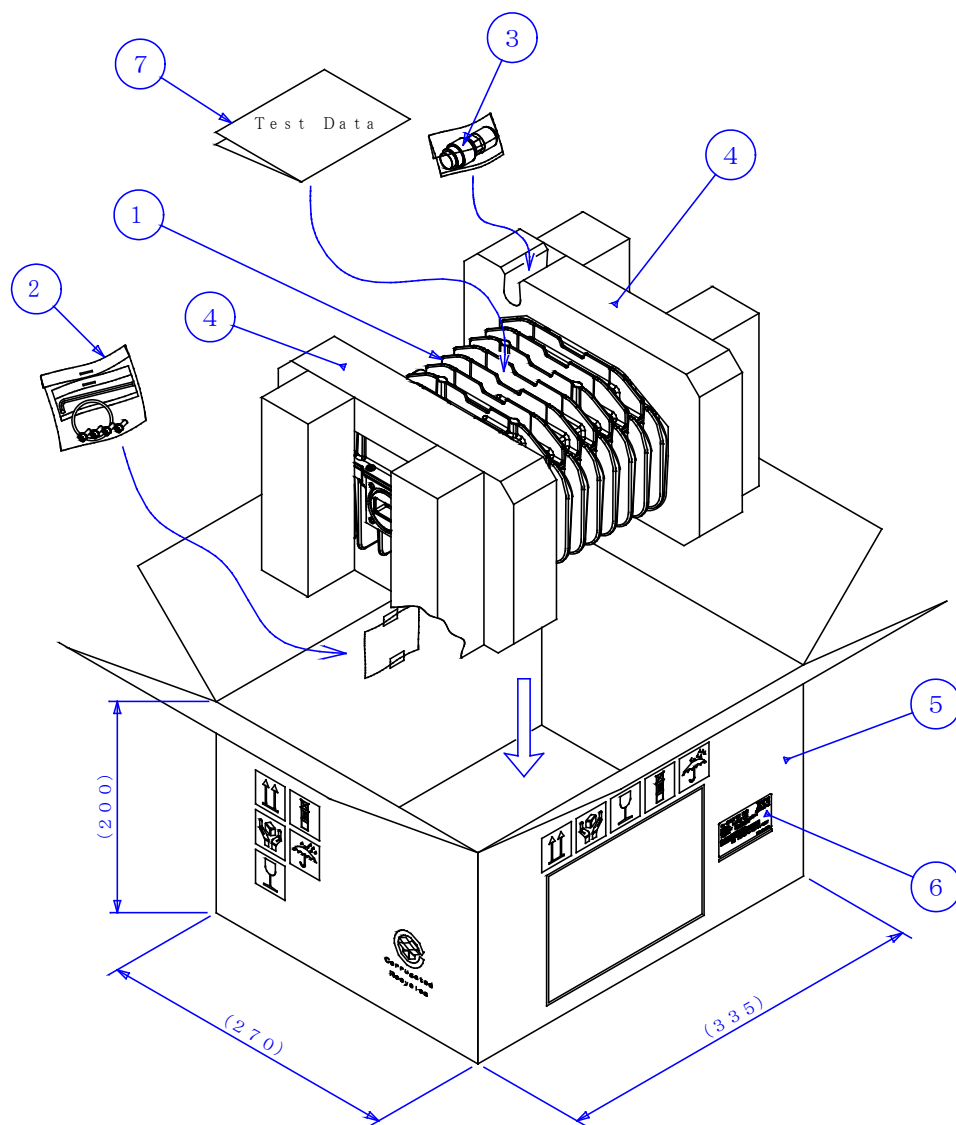


UNIT : mm

- ① : BUC
- ② : Accessories
 - O-RING
 - Hexagon Socket Head Bolts
M4×10 4 pieces (SUS, SW and W)
 - Hexagon Wrench Keys (M4 Type)
- ③ : Polyethylene Foam For Package Cushioning
- ④ : Corrugated Fibreboard (Double Wall)
- ⑤ : Label
- ⑥ : Test Data

* Above Specifications are subject to change without notice.

- NJT5118NM: IF / Ref. Input: N-type Female Connector
DC Power Input: MS Connector
- NJT5118FM: IF / Ref. Input: F-type Female Connector
DC Power Input: MS Connector



UNIT : mm

- ① : BUC
- ② : Accessories
 - O-RING
 - Hexagon Socket Head Bolts
M4×10 4pieces (SUS, SW and W)
 - Hexagon Wrench Keys (M4 Type)
- ③ : Accessory
 - MS mating connector
- ④ : Polyethylene Foam For Package Cushioning
- ⑤ : Corrugated Fibreboard (Double Wall)
- ⑥ : Label
- ⑦ : Test Data

* Above Specifications are subject to change without notice.