Released



## Insat C-band 2W BUC

RF Frequency: 6.725 to 7.025 GHz

## Model No. NJT5668

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

## Model No. NJT5668F

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

Specifications Rev.05 January 30, 2017

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# 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.

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1. Electrical Specifications

1. Electrical Specifications				
#	Items	Specifications		
1-1.	Output Frequency Range	6.725 to 7.025 GHz		
1-2.	Input Frequency Range	965 to 1,265 MHz		
1-3.	Maximum IF Input Level	+10 dBm max.		
	(without damage)			
1-4.	Conversion Type	Single, fixed L.O.		
1-5.	L.O. Frequency	5.76 GHz		
1-6.	Frequency Sense	Positive		
1-7.	Output Power @ 1dB G.C.P.	+33 dBm min. over temp.		
1-8.	Linear Gain	58 dB nominal		
1-9.	Gain Variation over frequency	5.0 dBp-p max. over 300 MHz		
	@ fixed temperature	2.0 dBp-p max. over 36 MHz		
1-10.	Gain Stability over temperature	5.0 dBp-p max.		
	@ fixed frequency			
1-11.	Requirement for External Reference			
	[Frequency]	10 MHz (sine-wave)		
	[Input Power]	-5 to +5 dBm @ Input port		
	[Phase Noise]	-120 dBc/Hz max. @ 100 Hz		
		-130 dBc/Hz max. @ 1 kHz		
		-140 dBc/Hz max. @ 10 kHz		
		-150 dBc/Hz max. @ 100 kHz		
1-12.	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		
1-13.	Spurious @ Pout = +33 dBm			
	[In-band]	-50 dBc max. @ 6.725 to 7.025 GHz		
	[Receive band]	-70 dBm max. @ 4.500 to 4.800 GHz		
	[Out-of-band]	-50 dBc max.		
1-14.	Receive Band Noise Power	-87 dBm/4kHz max. @ 4.500 to 4.800 GHz		
1-15.	Input Impedance			
	<n-type model=""></n-type>	50 ohms nom.		
	<f-type model=""></f-type>	75 ohms nom.		
1-16.	Input V.S.W.R.	2 : 1 max.		
1-17.	Output V.S.W.R.	2 : 1 max.		
1-18.	Output Load VSWR for Non Damage	Infinite: 1		
1-19.	DC Power Requirement	45		
	[Voltage Range]	+15 to +30 VDC		
4.55	[Power Consumption]	33 W max.		
1-20.	Mute	Shut off the HPA in case of L.O. unlocked or		
		no 10 MHz reference signal.		
1-21.	LED Indicator	GREEN: LO locked		
		RED: LO unlocked		
		(or no 10 MHz reference signal)		

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2. Mechanical Specifications

#	Items	Specifications
2-1.	Input Interface	IF / Ref. / DC Input:
	<n-type model=""></n-type>	N-type female connector, 50 ohms
	<f-type model=""></f-type>	F-type female connector, 75 ohms
2-2.	Output Interface	Waveguide, CPR-137 (with Grooved)
2-3.	Dimension & Housing	190.6 mm (L) x 160 mm (W) x 59 mm (H) [7.50" (L) x 6.30" (W) x 2.32" (H)] without interface connectors and screws
2-4.	Weight	1.9 kg max. [4.2 lbs]

3. Environmental Specifications

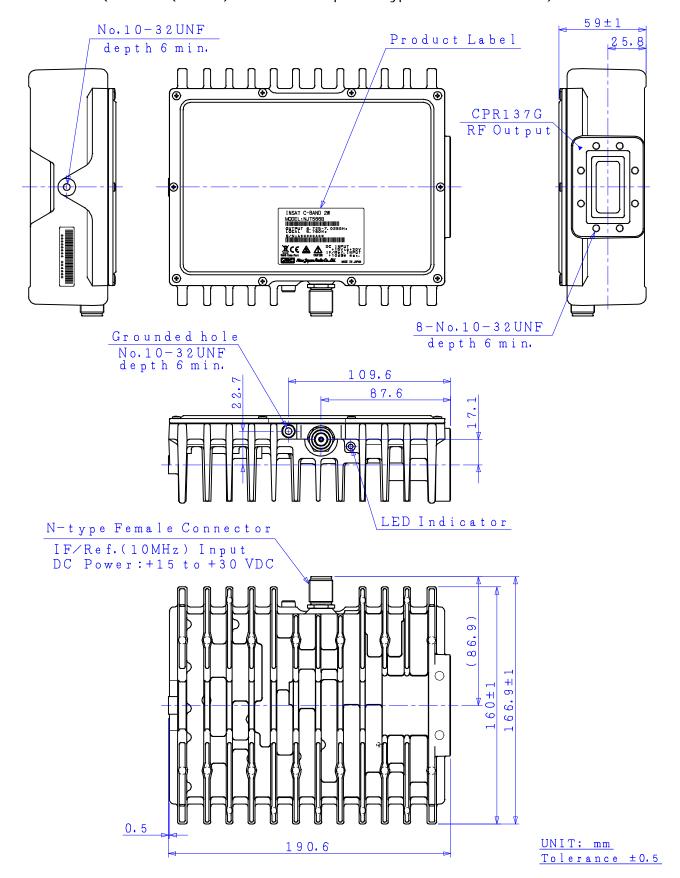
#	Items	Specifications
3-1.	Temperature Range (ambient)	
	[Operating]	-40 to +55 °C
	[Storage]	-40 to +75 °C
3-2.	Humidity	0 to 100 %
3-3.	Altitude	15,000 feet
3-4.	Vibration	5 G (3 axis, 50 Hz to 2 kHz)
		1 mm p-p (3 axis, 5 to 50 Hz)
3-5.	Shock	30 G (3 axis)
3-6.	Waterproof / Dustproof (IP Code)	IP 67
3-7.	Regulations	EU Directive (CE Marking)
		EMC (2014/30/EC)
		RoHS (2011/65/EU)
		Safety: EN60950-1
3-8.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	

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#### 4. Outline Drawing

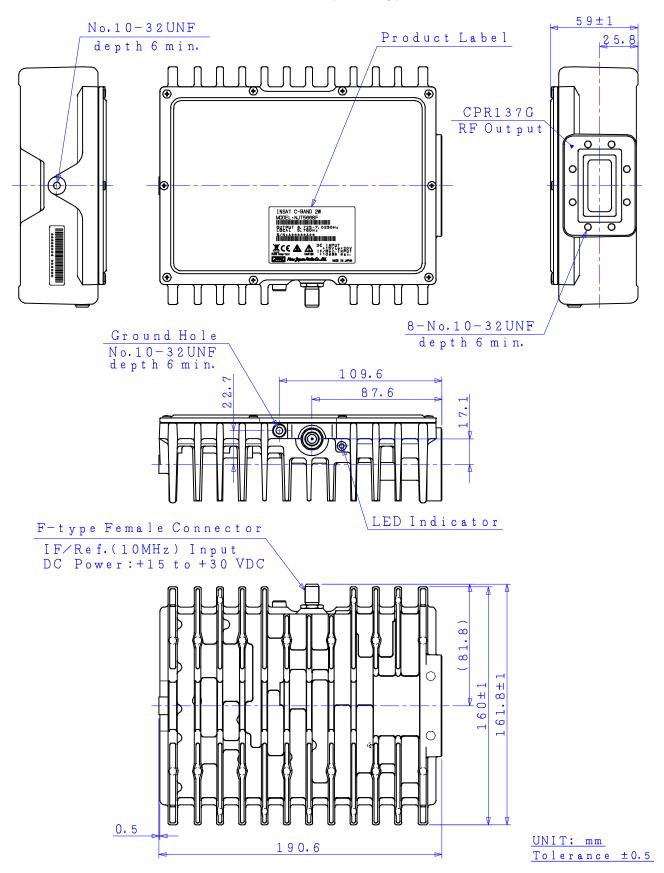
- NJT5668 (IF / Ref. (10MHz) / DC Power Input: N-type Female Connector) -



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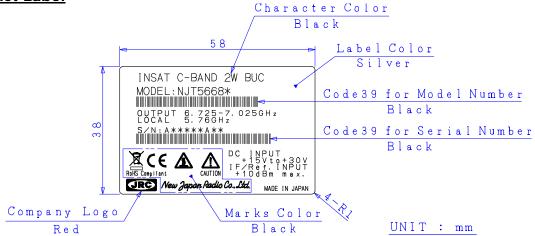
- NJT5668F (IF / Ref. (10MHz) / DC Power Input: F-type Female Connector) -



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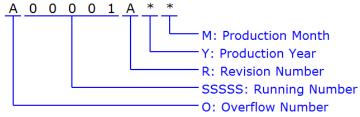


#### 5. Label Product Label



#### **Definition of Serial Number**

Serial Number (OSSSSSRYM) - ALPHANUMERIC (9 characters)



O: Overflow Number - ALPHABET (1 character) "A" to "Z", e.g.: A99999  $\Rightarrow$  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)

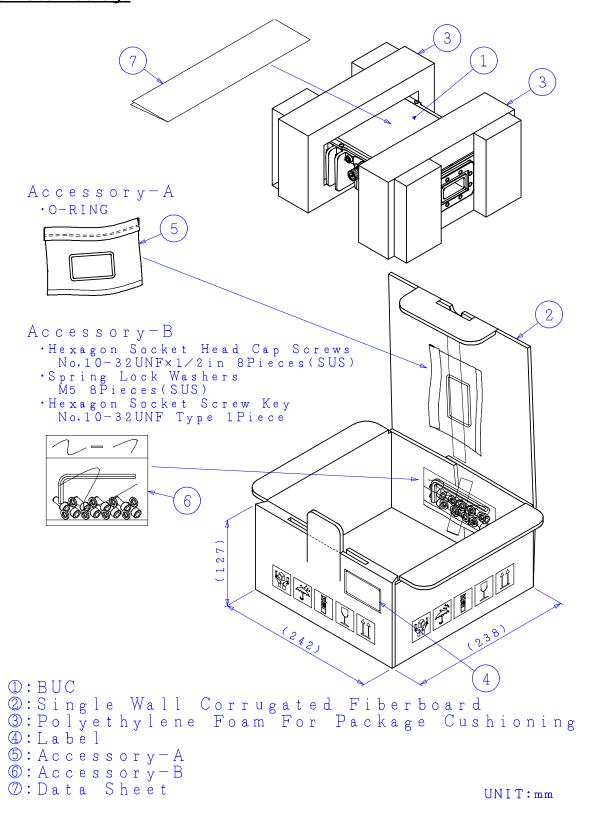
Calendar Number, e.g.: 2009: 9, 2010: 0, 2011: 1, 2012: 2 · · · ·

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

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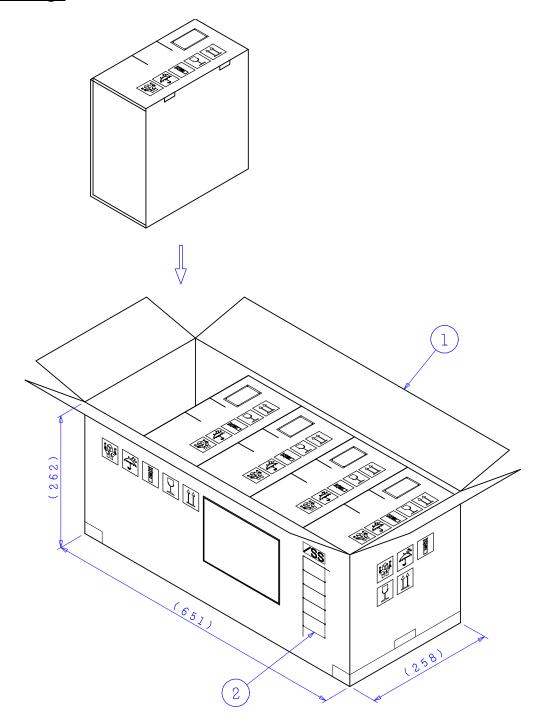
#### 6. Package Individual Package



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#### **Shipping Package**



①: Double Wall Corrugated Fiberboard ②: Label UNIT:mm

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