

-Preliminary-



Extended Ku-band 3W Transmitter

Model No. NJT5097

Type 1 (N-type Female Input Connector)

Model No. NJT5097F

Type 2 (F-type Female Input Connector)

Specifications

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New Japan Radio Co., Ltd
Microwave Components Division

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1. Electrical Performance

1-1.	Output Frequency Range	13.75 to 14.25 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	12.80 GHz
1-6.	Frequency Sense	Positive
1-7.	Output Power @ 1dB G.C.P.	+35 dBm typ. +33 dBm min. over temp.
1-8.	Linear Gain	53 dB typ.
1-9.	Gain Variation over frequency @ fixed temperature	5 dBp-p max. over 500 MHz 2 dBp-p max. over 36 MHz
1-10.	Gain Stability over temperature @ fixed frequency	5 dBp-p max. 2 dBp-p typ.
1-11.	ACPR	26 dBc min. @+32 dBm output power Compliance with IESS308 / SSOG 308
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 [in band] [in receive band]	-50 dBc max. @ 13.75 to 14.25 GHz -70 dBm max. @ 10.95 to 12.75 GHz
1-15.	Receive Band Noise Density	-110 dBm/50kHz max. @10.95 to 12.75 GHz
1-16.	Input Impedance	50 ohms nom. [Model No. NJT5097] 75 ohms nom. [Model No. NJT5097F]
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	+15 to +30 VDC 30 W max.
1-21.	Mute	Shut off the HPA in case of L.O. unlocked

2. Mechanical Specifications

2-1.	Input Interface	N-type, female (50 ohms) [Model No. NJT5097] F-type, female (75 ohms) [Model No. NJT5097F]
2-2.	Output Interface	Waveguide, WR-75
2-3.	Dimension & Housing	[Model No. NJT5097] 191.8. mm (L) x 119 mm (W) x 44.5 mm (H) [7.55" (L) x 4.69" (W) x 1.75" (H)] [Model No. NJT5097F] 186.7 mm (L) x 119 mm (W) x 44.5 mm (H) [7.35" (L) x 4.69" (W) x 1.75" (H)]
2-4.	Weight	1.2 kg max. [2.6 lbs]
2-5.	Vibration	5 G (3 axis, 50 Hz to 2 kHz) 1 mm p-p (3 axis, 5 to 50 Hz)
2-6.	Shock	30 G (3 axis)

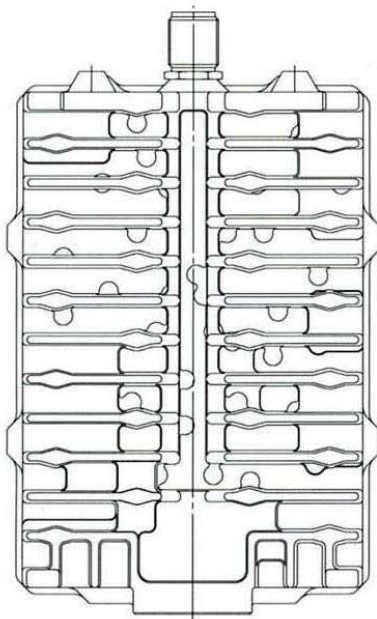
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3. Environmental Specifications

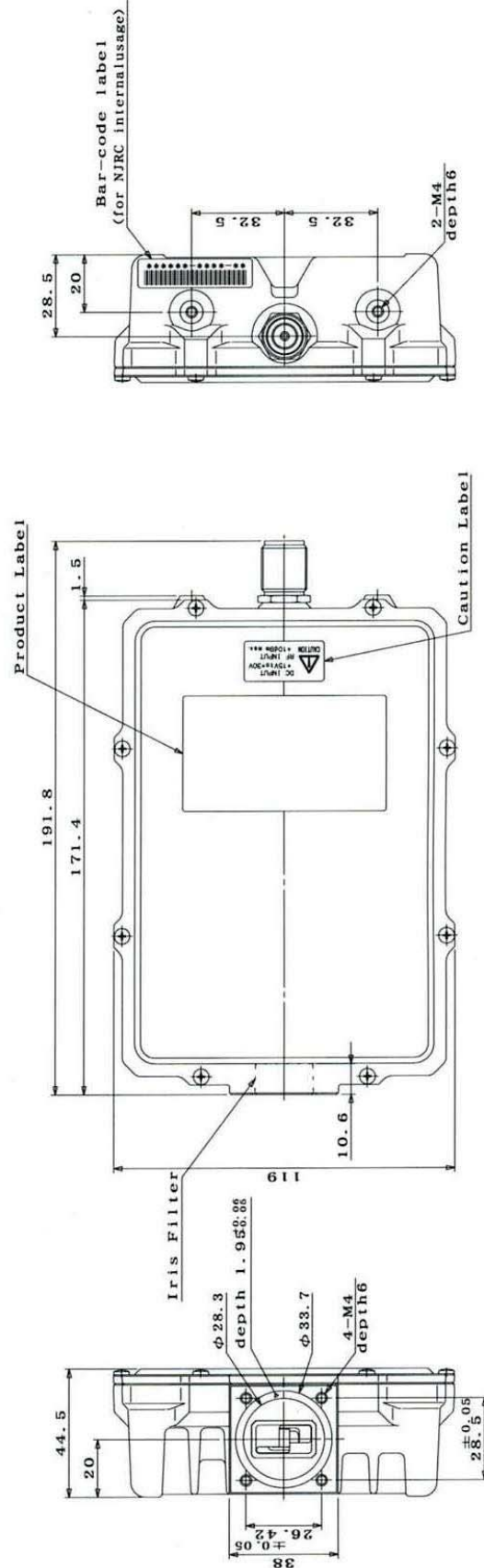
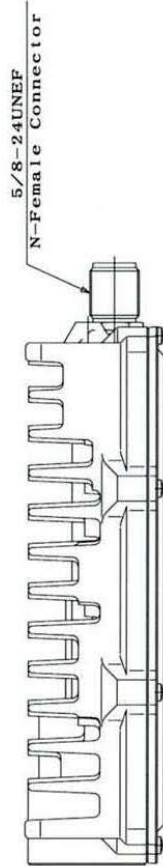
3-1.	Temperature Range (ambient)	-40 to +55 C (operating) -40 to +75 C (storage)
3-2.	Humidity	0 to 100 %
3-3.	Altitude	15,000 feet

4. Outline Drawing
(N-type Female Input Connector)



Unit : mm

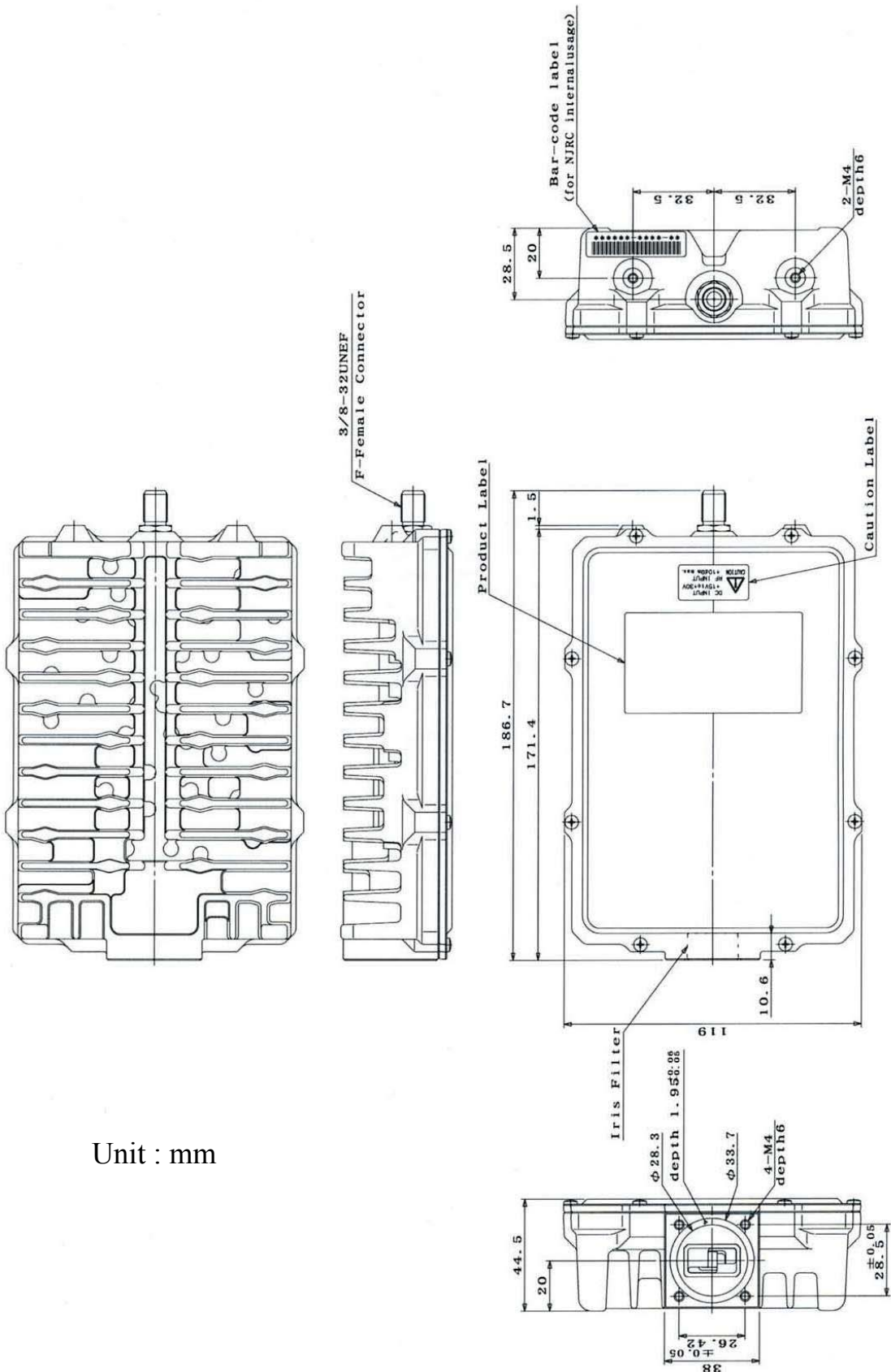
Unit : mm



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(F-type Female Input Connector)



Unit : mm