

-PRELIMINARY-



Ka-band Transmitter
Model No. NJT5803F
(F-type Female Input Connector)

Specifications

Rev.00L October 23, 2002

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New Japan Radio Co., Ltd
Microwave Components Division

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1. Electrical Performance

1-1.	Output Frequency Range	29.5 to 30.0 GHz
1-2.	Input Frequency Range	1,000 to 1,500 MHz
1-3.	Conversion Type	Single, fixed L.O.
1-4.	L.O. Frequency	28.5 GHz
1-5.	Frequency Sense	Positive
1-6.	Output Power @ 1dB G.C.P.	+32 dBm min.
1-7.	Linear Gain	60 dB nom.
1-8.	Gain Variation over frequency @ fixed temperature	5 dBp-p max. over 500 MHz 2 dBp-p max. over 36 MHz
1-9.	Gain Stability over temperature @ fixed frequency	6 dBp-p max.
1-10.	Requirement for External Reference	[Frequency] 10 MHz (sine-wave) [Input Power] -5 to +5 dBm @ Input port [Phase Noise] -134 dBc/Hz max. @ 100 Hz -145 dBc/Hz max. @ 1 kHz -150 dBc/Hz max. @ 10 kHz -155 dBc/Hz max. @ 100 kHz
1-11.	L.O. Phase Noise	-50 dBc/Hz max. @ 100 Hz -72 dBc/Hz max. @ 1 kHz -82 dBc/Hz max. @ 10 kHz -92 dBc/Hz max. @ 100 kHz
1-12.	Spurious [in band] [in receive band]	-50 dBc max. @ 29.5 to 30.0 GHz -79 dBm max. @ 19.2 to 20.2 GHz
1-13.	Receive Band Noise Power	-160dBm/Hz max. @19.2 to 20.2 GHz
1-14.	Input Impedance	75 ohms nom.
1-15.	Input V.S.W.R.	2 : 1 max
1-16.	DC Power Requirement	+15 to +24 VDC 35 W max.
1-17.	Mute	Shut off the HPA in case of L.O. unlocked

2. Mechanical Specifications

2-1.	Input Interface	F-type, female (75 ohms)
2-2.	Output Interface	Waveguide, WR-28
2-3.	Dimension & Housing	170 mm (L) x 130 mm (W) x 80 mm (H) (Target)
2-4.	Weight	2.5 kg max.
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)

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	10,000 feet