



Ku-band 6W Transmitter

Model No. NJT5027L

Type 1 (N-type Female Input Connector)

Model No. NJT5027FL

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	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.	+37.7 dBm typ. over temp. +37.7 dBm min. @ +25 C
1-8.	Linear Gain	56 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.	ACPR	26 dBc min. @+36dBm output power Compliance with IESS308 / SSOG 308
1-12.	Requirement for External Reference	[Frequency] 10 MHz (sine-wave) [Input Power] -5 to +5 dBm @ Input port [Phase Noise] -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] -50 dBc max. @ 14.0 to 14.5 GHz [in receive band] -70 dBm max. @ 10.95 to 12.75 GHz [Out-of-band] -50 dBc max. @Pout=+36dBm
1-15.	Receive Band Noise Density	-156 dBm/Hz max. @10.95 to 12.75 GHz
1-16.	Noise Figure	20 dB max.
1-17.	Group Delay over any 54MHz	2.5 nS p-p max.
1-18.	Input Impedance	50 ohms nom. [Model No. NJT5027L] 75 ohms nom. [Model No.NJT5027FL]
1-19.	Input V.S.W.R.	2 : 1 max
1-20.	Output V.S.W.R.	2 : 1 max.
1-21.	Output Load VSWR for Non Damage	Infinite : 1
1-22.	DC Power Requirement	+15 to +24 VDC 50 W max.
1-23.	Mute	Shut off the HPA in case of L.O. unlocked
1-24.	LED Indicator	Green:LO locked RED:LO unlocked (or no 10MHz reference signal)



2. Mechanical Specifications

2-1.	Input Interface	N-type, female (50 ohms) [Model No. NJT5027L] F-type, female (75 ohms) [Model No. NJT5027FL]
2-2.	Output Interface	Waveguide, WR-75
2-3.	Dimension & Housing	186.4mm (L) x 167mm (W) x 73 mm (H) max. [7.33" (L) x 6.57" (W) x 2.87" (H)]
2-4.	Weight	2.3 kg max. [5.1 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)

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
3-4.	Comply with RoHS (Restricting the use of Hazardous Substances) directives	



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