

T / R_NBFM Audio Microwave Link



T_NBFM / R_NBFM Rev.2K7

GENERAL DESCRIPTION

The T_NBFM-01 and the R_NBFM-01 are the transmitting and the receiving parts of a reliable and compact microwave link, able to transfer over long distance an MPX FM stereo signal or an audio mono with an optimum quality.

The excellent performance of this equipment is due to the intensive use of fast signal processing techniques (on DSP), applied to the IF signals (79 MHz).

Moreover, the most recent technologies in designing low noise oscillators and reception front-end with high dynamic range led the NBFM microwave link get extraordinary results such as a Stereo-Separation greater than 60 dB, a baseband Signal to Noise Ratio greater than 60 dB and an IF ripple less than 0.05 dB.

The equipment operates in the 2 GHz band, with a 200 KHz channel.

The programming and the monitoring of the main parameters, apart from being done through the local interface (keypad and display interface on the front panel), can also be made remotely through an RS232 interface or through an RS485 interface.

FEATURES

- Slim line indoor units
- Frequency Band: 1.2 ÷ 2.6 GHz
- Up to 25 MHz frequency agile
- Digital Signal Processing Technology
- Very low phase noise
- IF bandwidth: 200 KHz
- Power out: 36 dBm
- Very High spurious suppression
- Excellent Noise figure
- IF ripple < 0.05 dB
- FM stereo Multiplex or audio Mono input
- RS232, RS485 and SNMP remote control type possibility

SPECIFICATIONS

Frequency Band: 1.2 GHz ÷ 2.6 GHz

Frequency Coverage: up to 25 MHz

Frequency Resolution: 40 kHz

Frequency Stability: < ± 5 ppm

Transmitter:

RF Output Level: +36 dBm

Spurious Emission: > 70 dBc

RF Output Connector: Type N female

Modulator:

Output Frequency: 79 MHz

IF Spurious Emission: > 70 dBc

MPX Input: Impedance 10 KOhm
Level 0 dBm (@ 75 KHz deviation)
Connector BNC female

SCA Input: Impedance 10 KOhm
Level 0 dBm (@ 7 KHz deviation)
Connector BNC female

MONO Input: Impedance 10 KOhm
Level 0 dBm
Connector XLR female

FM Deviation Level: -3.5 dB ÷ +4 dB (step 0.5 dB)

Receiver

Noise Figure: < 12 dB

IMD IP3: +4 dBm

IF Occupied Bandwidth: 200 KHz

In band IF Ripple: < 0.05 dB

Selectivity @ ± 200 KHz: > 100 dB

Image and Spurious Frequency Rejection: > 65 dB

Dynamic Range: -25 dBm ÷ -106 dBm

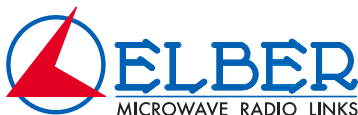
ORDERING INFO

T_NBFM/01/xx

T_NBFM/01/RS	RS232 & RS485
T_NBFM/01/SNMP	RS232 & RS485 & SNMP

R_NBFM/01/xx

R_NBFM/01/RS	RS232 & RS485
R_NBFM/01/SNMP	RS232 & RS485 & SNMP



Demodulator:

MPX Output: Connector BNC female
Level 0 dBm (@ 75 KHz deviation)

Output Level Control: -3.5 dB ÷ +4 dB (step 0.5 dB)

Output Impedance: < 40 Ohm balanced

Frequency Response: 30 Hz ÷ 53 KHz < 0.1 dB
53 KHz ÷ 80 KHz < 0.3 dB

Stereo Separation: > 60 dB

THD @ 1 KHz: < 0.04%

S/N Ratio: > 60 dB @ -40 dBm input level

Mono Output: Connector XLR male
Level 0 dBm (@ 75 KHz deviation)
Impedance < 80 Ohm balanced

Modulation Sensibility: -3.5 dB ÷ +4 dB (step 0.5 dB)

Frequency Response: 30 Hz ÷ 53 KHz < 0.1 dB
53 KHz ÷ 80 KHz < 0.3 dB

De-emphasis: 75 / 50 µs

Squelch Level: -70 dBm ÷ -90 dBm

Control:

Front Panel (LCD Display 24x2, Keypad)
RS-232
RS-485
SNMP (optional)

Electrical:

Input Voltage: AC 230V / 115V ±10% 50/60Hz
DC 22V to 65V

Power Consumption: Transmitter 50 W
Receiver 30 W

Physical:

Cabinet Rack: Width: 482 mm (19")
Height: 44 mm (1U)
Depth: 480 mm

Environmental:

Operating Temperature Range: -10 to 65°C

Relative Humidity: 0 to 95%, non condensing

Compliance:

CE mark

APPLICATIONS

