

S-BAND TELEMETRY RECEIVER RXSV / RXSD



Rugged design * Low weight, low size * Video subcarrier demodulator optional * Remote control optional

This S-Band FM Receiver module is designed for video (*Model **RXSV***) or data transmission (*Model **RXSD***) in industrial, military, and scientific applications. The receiver is a double superheterodyne type with the first IF of 360 MHz and a second IF of 70 MHz. The input frequency can be set by the user by means of the 3 BCD-switches on top of the module coverplate. Version available with 3 wire interface for remote control of frequency setting. For video subcarrier demodulation a special circuit can be activated, providing a 1Vpp analog signal and TTL-compatible signal in case of GPS transmission.

TECHNICAL DATA

Input Frequency (factory preset) 100 MHz bandwidth in 2200 ... 2500 MHz

Frequency Generation PLL Synthesizer, Crystal Stabilized

Frequency Stability $\pm 1.5 \times 10^{-5}$

Tuning Range (by customer) 100 MHz in steps of 100 kHz

Preamplifier / IF-Section

Input Stage LNA following 3 Resonator Input Filter

Input Noise Figure 3 dB max.

1st IF 360 MHz

2nd IF 70 MHz

AGC Range 70 dB

Image Rejection > 60 dB

IF Suppression > 80 dB

Receiver Demodulation FM

Noise figure 3 db 3 db

FM Deviation ± 4 MHz (RXSV) / matching with IF-BW (RXSD)

Demod. Signal Bandwidth 5 MHz / 3 dB, CCIR 405 (RXSV) / up to 3.5 MHz (RXSD)

Output Characteristics

Demod. Output Amplitude 1 VP-P @ 75 Ω (RXSV) / 2 VP-P @ 75 Ω (RXSD)

RF-Level Monitor Output 0.5 ... 4 V DC

Spurious Emissions (L.O.) < -70 dbm, at Antenna Connector

Power Supply Input

Supply Voltage 11.5 Vdc to 24 Vdc

Supply Current 230 mA max.

Subcarrier for Video(Optional)

Subcarrier modulation output 1Vpp 600 Ohm for tone, 5V TTL for Data (GPS)

Subcarrier FM deviation ± 45 kHz max

Subcarrier modulation bandwidth 1 Hz to 8 kHz/3db

RF-Antenna Connector SMA female, 50 Ohms

Supply / Output Signals Connector SUB-D-9, male

Case / Dimensions Milled Aluminium 120 x 78 x 40 mm

Operation Temperature Range -20°C to +60°C

Weight 450 g

OPTIONS

- Frequency Control via Serial Interface
- L-Band Transmission Frequencies

System Connector Pin Assignment

J2 Pin Connection

- 1 Power Supply Positive Input
- 2 Power Supply 0V, GND, Chassis
- 3 Signal GND, Chassis
- 4 Demodulated Signal GND, Chassis
- 5 Demodulated Signal Output
- 6 Subcarrier tone output (option)
- 7 Subcarrier Data output (option)
(TTL for GPS)
- 8 TTL Pulse Shaped Demod.
Signal Output (TE810D only)
- 9 RF-Level Monitor Output

