TR FM02-S - Transmitter

IN-SNEC®

Full S-Band

These 2W full S-Band transmitters are dedicated to send telemetry or video data .

Many configurations are available to meet most system requirement and to offer a complete solution to your data link needs.

Its small size, its light weight and its robustness make it ideal for integration as well in fixed systems as in vehicles with little available space and harsh environment like missile, target, drone, unmanned vehicle, light aircraft, ground vehicles,...

Main Functions

- Telemetry system for missile, UAV, aircraft, ground vehicles or fixed station.

Main Features

- Operation up to 10 Mbps
- Full S-Band operation
- FM Modulation
- Programmable output frequency (Step 500kHz)
- Output power ≥ 2W
- Remote RF power control
- IRIG 106-99 Compliant
- Designed for harsh environments
- Small size (3"x 2"x 0.59")

TRFM0-2S Full S-band Transmitter

Technical specifications

Output characteristics

Frequency range	2180 to 2485 MHz (3 sub-ranges 2180 to 2290 2290 to 2400 2400 to 2485 to be defined at order)
Frequency step	500kHz user programmable through an RS232 link
Frequency stability	+ 25ppm
PLL time	≤ 1 second
Full Power output	≥ 2W
Reduced Power output	≥ 500mW
Impedance 50	Ω
VSWR <	1.5
Blanking	Internal during power-up and frequency programmation
Protection	No damage into infinite VSWR all phases

Modulation characteristics

Input impedance	50Ω, 75Ω, 10kΩ (to be defined at order)
Modulation sense	Positive
Maximum deviation	± 5MHz
Deviation sensivity :	From 0.2 to 5MHz/Vpp (to be defined at order)
Frequency response	100Hz to 7MHz ± 1.5dB
Distortion	≤ 2 % at ± 2.5MHz dev.
Incidental frequency modulation	< 20 kHz peak
Spurious and harmonics	≤ -25dBm
Maximum input voltage	± 2V

Interfaces

MCK, 9 pins

SMA

MODEL REFERENCE

TR FM02-S-X-YYY-ZZZ

where

- X = sub-band (1=2180 to 2290, 2=2290 to 2400, 3=2400 to 2485 MHz)
- YYY = deviation sensivity (0.2 to 5.0, step 0.1MHz/Vpp)
- ZZZ = modulation input impedance (50Ω, 75Ω or 10kΩ)

Environmental conditions

Operating temperature range	-30°C to +70 °C
Storage temperature range	-54°C to +95 °C
Relative humidity	MIL-STD-810 Method 507, 30°C 95%
Sinusoidal vibration	20g peak, 20 to 2000Hz, 3 axes
Random vibration	0,45 g^2/Hz, 20 to 2000Hz, 30 grms, 3 axes
Shock	100g peak, 11ms, ½ sine, 3 axes 400g peak, 3ms, ½ sine, 3 axes
Acceleration	100g, 3 axes
EMI	Mil STD 461E
Conducted susceptibility	CS 101, 114, 115 & 116
Radiated susceptibility	RS 101 & 103
Conducted emissions	CE 102
Radiated emissions	RE 101 & 102

Primary power requirement

Supply voltage	28 ± 4 VDC 12V ±5% (option 1) (other option on request)
Supply current	
full power output	≤ 0.65A
reduced power output	≤ 0.45A
Grounding	Antenna, Power and modulation returns common to chassis
Reverse polarity	Protection up to -40V

Mechanical characteristics

Dimensions	3"x 2"x 0.59" (76.2 x 50.8 x 15 mm) * Other dimension available on specific requirement
Weight	<150 g

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Z.D.S. reserves the right to change specifications without notice - FTP147.4.2