

TESTEM TXW

- FM telemetry transmitter -

e.g. for applications in telemetry and data link systems, avionics and marine

- wide frequency range: VHF, P band, UHF and L/S band versions available
- fully programmable via serial Interface
- industrial temperature range
- ruggedized (shock proof) for harsh environments
- baseband response may include DC
- software selectabel data input: analog single ended, analog differential, TTL, RS422
- 10th order premodulation filter programmable from 500 Hz to 500 kHz
- output power versions 10 mW to 5 W
- high dynamic range, altitude unlimited
- 10 to 36 V DC isolated power supply
- different data output

SPECIFICATIONS:

GENERAL

Description transmitter FM telemetry
 Device type TXW

RF SECTION

Frequency range (version V) 220 ... 400 MHz
 Frequency range (version U) 380 ... 480 MHz
 Frequency range (version P3) 220 ... 280 MHz (2W)
 Frequency range (version K) 100 ... 200 MHz
 Synthesizer step width 25 kHz (12.5 kHz Vers.S)
 Antenna impedance 50 Ω
 VSWR 2:1 (maximum)
 Reference oscillator stability 5 ppm (1 ppm typical)
 RF power output (default) 10 mW (for BSU amplifier)
 RF power output (vers. P3) 2 W (220 ... 280 MHz)
 RF power output (vers. P270) 500 mW
 RF power output (vers. P370) 5 W
 Harmonic & spurious rejection 60 dBc (minimum)

MODULATION

Modulation type true FM
 Modulation sensitivity adjustable
 FM deviation (version H) ± 50 kHz to ± 500 kHz
 FM deviation (version M) ± 10 kHz to ± 100 kHz
 FM deviation (version N) ± 2 kHz to ± 10 kHz
 FM deviation (version N-D) ± 2 kHz to ± 5 kHz
 Frequency response (vers.H) 500 kHz (-0.5 dB)
 Frequency response (vers.M) 160 kHz (-0.5 dB)
 Frequency response (vers.N + S) 10 kHz (-0.5 dB)
 low-end frequ. response (vers. A) 10 Hz (-1 dB)
 low-end frequ. response (vers.D) DC

SYSTEM CHARACTERISTICS

Tuning method PLL synthesizer
 Temperature compensation digital
 Isolation isolated power supply inp.

OUTPUTS

Status output H = ok, L = warning/error
 RF level monitor output 50 mV / dB (4.0 V = normal)



INPUTS

Multi function I/O default = ON / STANDBY
 Digital modulation input TTL / RS422
 Analog modulation input 0.5 – 5 Vpp (programmable)
 Modulation sense Differential and single ended

POWER SUPPLY

Supply voltage 10 ... 36.0 V DC (isolated)
 Supply current 280 mA @ 12V
 Supply current 130 mA @ 28V
 Reverse polarity protection max. 47 V DC (no time limit)

ESD PROTECTION

Peak voltage (IEC 1000-4-2) ±8 kV (contact discharge)
 Peak voltage (MIL 833-3015.7) ±15 kV
 Peak current (Supply Voltage) 100 A (8/20µs)
 Peak current (all other I/O pins) 20 A (8/20µs)

ENVIRONMENTAL

Operating temperature -40 °C ... +85 °C (case temp.)
 Humidity 95% RH
 Altitude unlimited
 Vibration (random) 0.1 g²/Hz (20Hz-2kHz)
 Vibration (sine) 20g (20Hz-2kHz)
 Shock (½ sine) 100 g peak (11ms)

PHYSICAL CHARACTERISTICS

Dimensions(excl. connectors) 120 x 60 x 20 mm
 Supply/signal connector DSUB-15-HighDensity male
 AMP AMPLIMITE HD-
 Antenna connector SMA female,
 opt. BNC/TNC