

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 FM telemetry transmitter
 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 polarity programmable

POWER SUPPLY

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

ESD PROTECTION

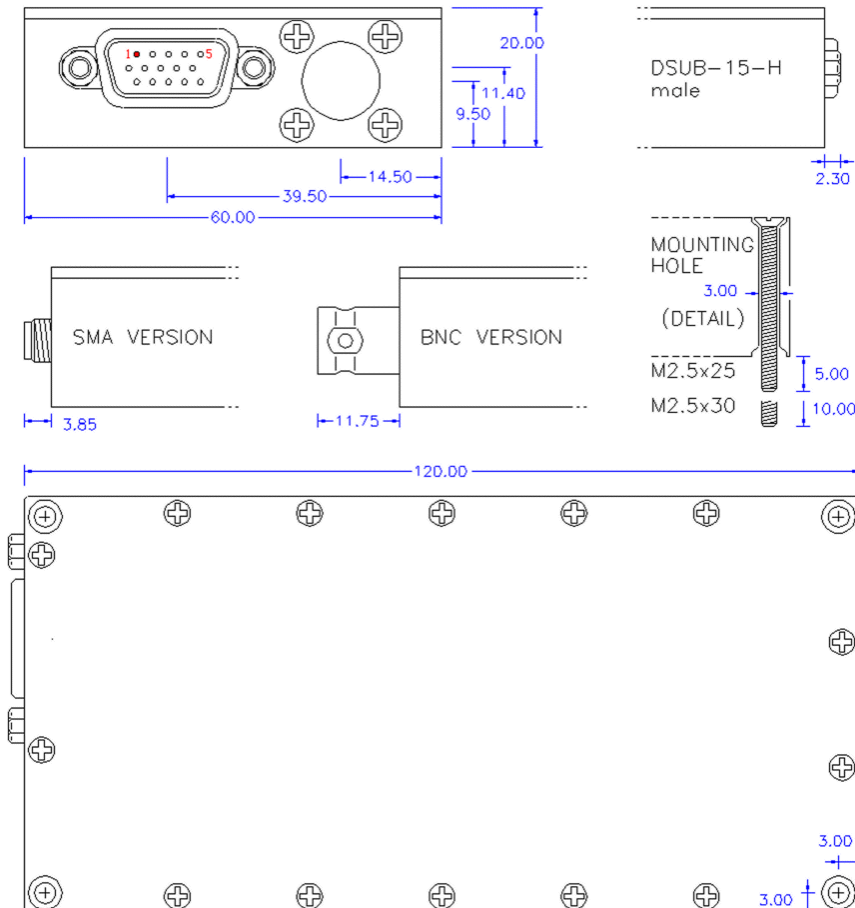
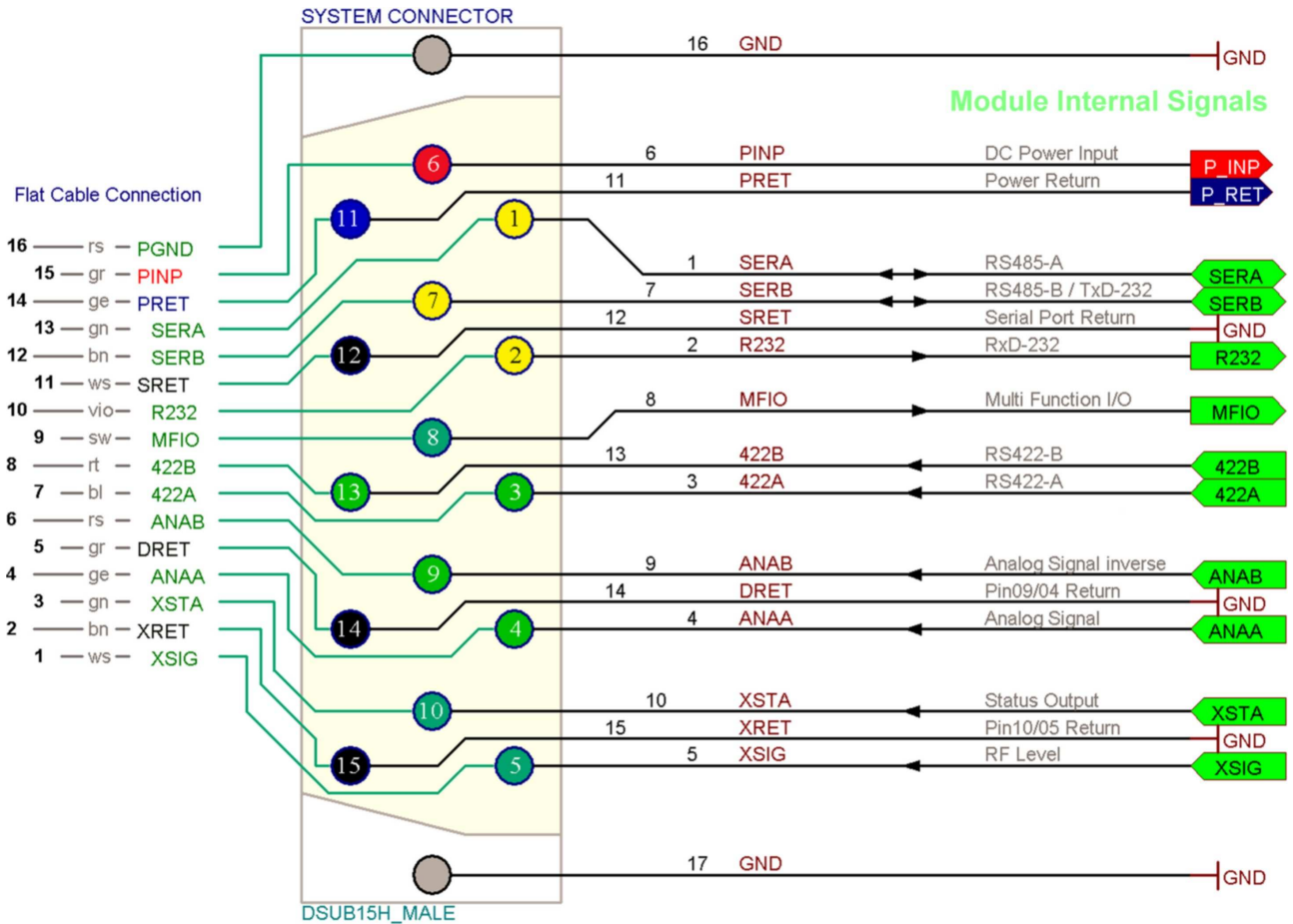
Peak voltage (IEC 1000-4-2) ±8 kV (contact discharge)
 Peak voltage (MIL 833-3015.7) ±15 kV
 Peak current (Supply Voltage) 100 A (8/20µs)
 Peak current (all other I/O pins) 20 A (8/20µs)

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



DSUB Connector Pin Description

SIGNAL	PIN	FUNCTION
PINP	06	DC Power Input (+)
PRET	11	DC Power Return
SERA	01	Serial Port RS485-A
SERB	07	Serial Port RS485-B & Serial Port TxD
SRET	12	Serial Port Return
R232	02	Serial Port RxD
MFIO	08	Multi Function I/O Default=/Standby
422B	13	Digital Data (inverse)
422A	03	Digital Data Output
ANAB	09	Analog Data (inverse)
DRET	14	Data Signal Return
ANAA	04	Analog Data Output
XSTA	10	Status Output
XRET	15	Pin10/05 Return
XSIG	05	Fieldstrength Output