

**Space Telemetry
Receiver**

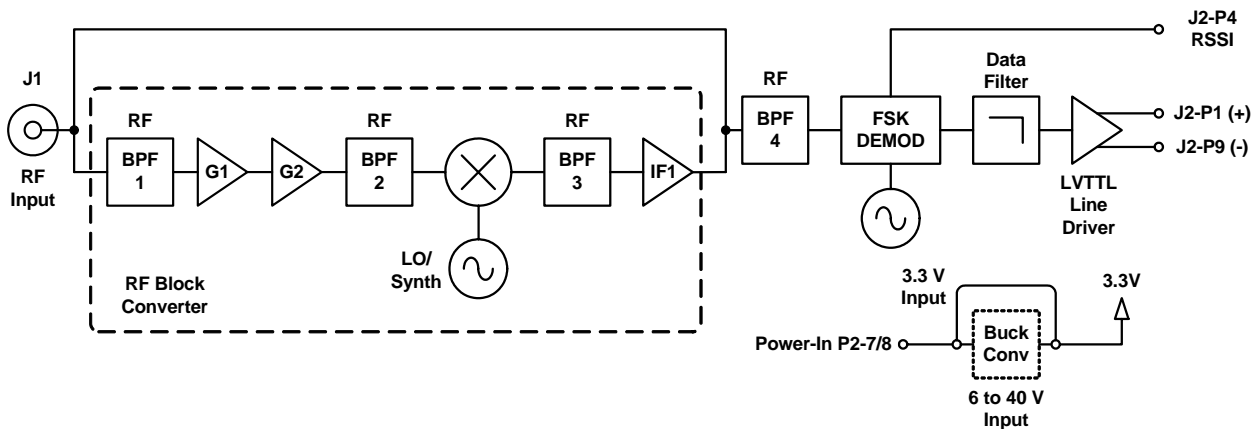
**FSK Demodulation
Multiple Frequency
(UHF, L, S, C)
Bands Available
Low Data Rate
Low Power**



The STR(X) Receiver

Is designed for Space Launch and Flight where low data rates and low power requirements are needed. The STR(X) is low cost receiver solution designed using COTs components which are tested to perform in the most demanding of environments. Typical STR(X) uses have included Sounding Rockets, Low Earth Orbit (LEO) Satellite, and Ultra-High Atmospheric Monitoring missions to name a few.

The STR(X) provides factory set channel assignments in the UHF Band without an RF down-converter section; and with an RF down-converter in the L, S, C-Bands, where (X) is the assigned operating band. The receiver is also capable of providing a factory set data output rate, ranging from 10 to 120 kbps, and is typically configured for 50 kbps, with a standard LVTTTL balanced output.



The STR(X) provides a wide range user power input range options including a very low DC power input level at +3.3V, or a standard +6 to +40V input range level using a DC Buck Converter option, all total approximately less than or equal to 1 Watt. The STR(X) is designed to withstand pyrotechnic shock and vibration and the thermal vacuum conditions of the launch. It has

a wide operating temperature range and thermal cycle tolerance that are typical of these missions. The design also features a rugged light weight nickel-plated enclosure which provides protection for mechanical handling, flight conditions, and provides EMI / EMC protection to the operational requirements of MIL-STD-461 and MIL-STD-1541.

Part Number Builder

STR(X)-750-FSK (Customer Requirements)

Example: STR(U)-750-FSK-(310M-55K)

310 = 310 MHz Receive Frequency

55 = 55 kbps Data Rate

Receiver Band Selection

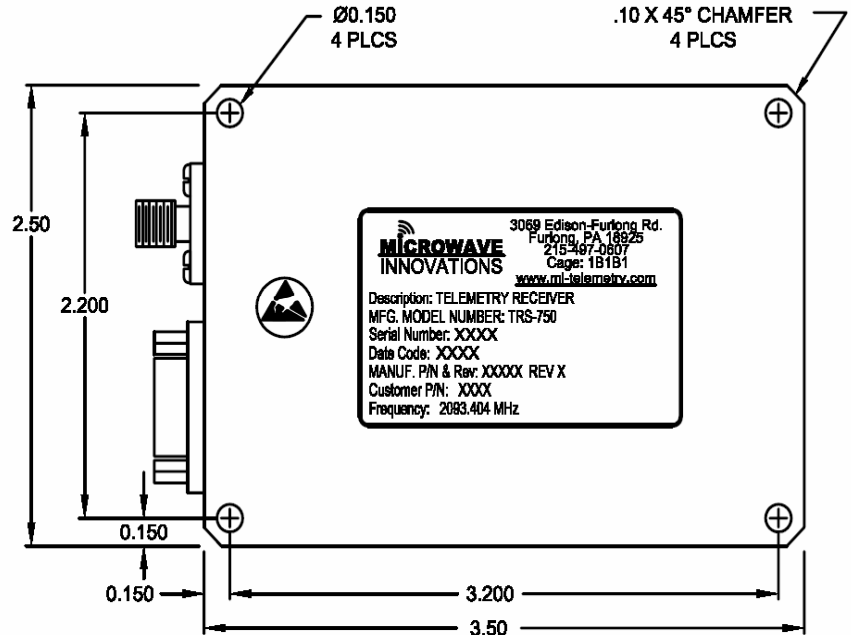
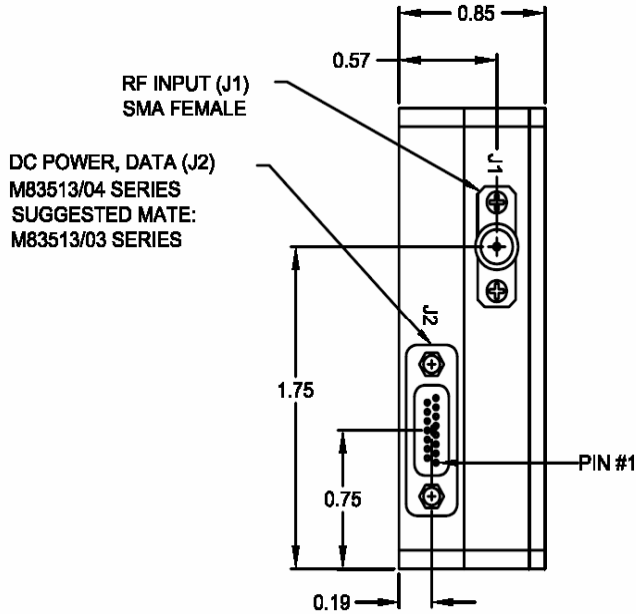
Contact MI directly for availability of desired frequencies

U = UHF Band (310-350, 400-440, 810-870 MHz)

L = L-Band (1435-1525, 1755-1850 MHz)

S = S-Band (2200-2290, 2360-2395 MHz)

C = C-Band (5400-5900 MHz)



Typical Performance Features, Dependent on Frequency

Frequency Range:	See Band Available (Call For Details)
Carrier Stability:	±20 PPM Over Environment
Modulation:	Frequency Shift Key (FSK)
Input Impedance:	50-Ohms 2:1 Maximum VSWR
Noise Figure:	9 dB (Typical)
IF Band Width:	150 kHz Minimum (-3dB) Bandwidth
Dynamic Range:	50 dB Minimum
Sensitivity:	-85 dBm Max (for BER 1x10e-6) (Typically -94 dBm)
Image Rejection:	80 dB Minimum
Data Format:	Async Bi-Phase M, PCM Data
RSSI:	0 - 4 VDC
Deviation:	50 kHz, Nominal
Output:	LVTTL,
Data Rate:	10 to 100 kbps (Standard)
Bit Error Rate (BER):	<1x10E ⁻⁶ BER Typical
DC Power:	+6 to +40V DC
Power Input:	<1W @ +28 VDC

Mechanical Features:

Weight:	8 Ounces Maximum (227 grams)
Pressurization:	Vented Enclosure
Rec. Mounting:	#10 SHCS 1.25 inches (4 Places)
Dimensions:	0.85" H x 2.50" W x 3.50" L
Connectors:	(J2) 15 Pin Micro-D Connector Female
RF Connector:	(J1) SMA Female

Environmental Features:

Operating Temp Range:	-20°C to +70°C (Standard) -40°C to +85°C (Extended)
Altitude:	Unlimited
Vibration:	20 Grms, 3-Axis
Shock:	100 G, 11-milliseconds 3-Axis
Acceleration:	100 G, 3-Axis
Humidity:	Up to 95% Non-Condensing
EMI/EMC:	MIL-STD-461 & MIL-STD-1548

Unique Customer Requirements Are Welcome

Connectors Types, PWR Non-Isolated, Isolated, Enclosure Size, Data Rates, RF Center Frequency & Power

