

# 700 MHz TTA – Public Safety Dual Duplexed



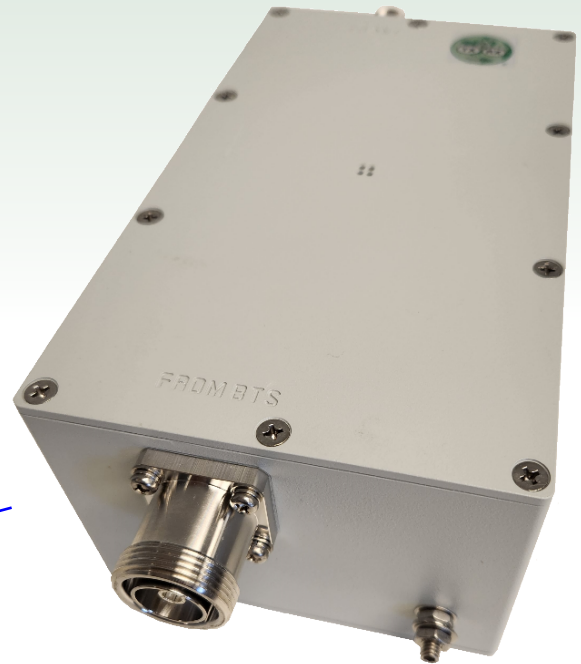
DS039021-1B  
6/29/2023

**Model Number: 438-83B-23005**

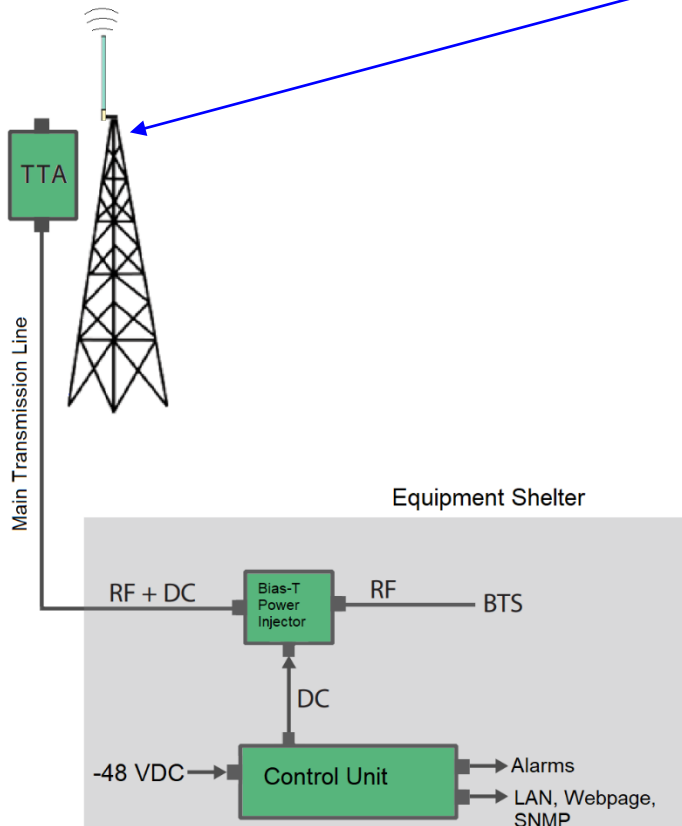
**Covers Public Safety 700 MHz Band (narrow band segment)**

## Features:

- **Duplexed transmit and receive paths**
  - Uplink: 794-806 MHz
  - Downlink: 764-776 MHz
- **Uplink Gain: 14 dB (low ripple)**
- **Downlink handles 400 W**
- **Test Port for direct antenna sampling**
- **Bypass Mode - failsafe**



## System Configuration:



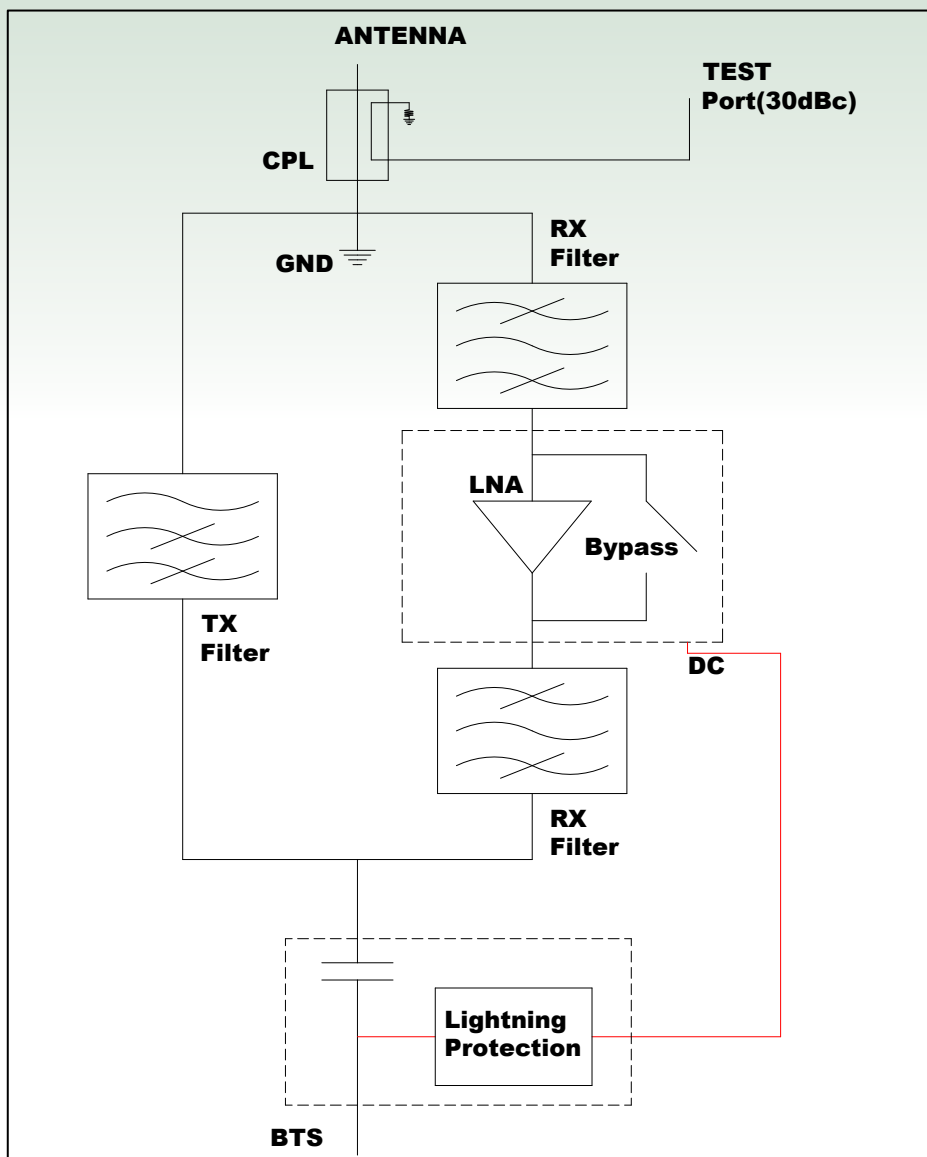
Connected with Bias-T power injector and control unit.

Control Unit provides full monitoring of TTA operation for up to two TTAs.

## System features:

- Advanced current monitoring
- Alarm logging / Historical data
- LAN Connection.
- Remote control monitoring via Webpage.
- SNMP alarm management

TTA Block Diagram:



**Electrical Specifications:**

Item	Specification
<b>Downlink:</b>	
Frequency Range	764MHz - 776MHz
Return Loss, All Ports	18dB Min
Insertion Loss	0.5dB Typical, 0.7dB Max
Coupling Value (Test Port)	30dBc $\pm$ 2.0dB
Rx Band Rejection	50dBc Min
Maximum Power Handling, avg	400Watts Max
IMD at Uplink Band	-115dBm, 2-Tone 43dBm carriers
<b>Uplink:</b>	
Frequency Range	794MHz - 806MHz
RF Gain, nominal	14dB Min
Gain variation	$\pm$ 0.5dB
In-Band Ripple	$\pm$ 0.6dB
Gain Variation (over temperature)	$\pm$ 1.5dB
Rejection to Tx Band	85dBc Min
Insertion Loss, (Bypass mode)	3.0dB max
Return Loss, All Ports	18dB Min
Return Loss (Bypass Mode)	14dB Min
Noise Figure	1.8dB typ. (room Temp), 2.3dB max (over temp range)
Output 1dB compression	+16dBm Min
OIP3	+28dBm Min
DC Supply Voltage	11V to 18V DC
DC Current Consumption	80mA Max, (LNA on)
DC Injection	Via BTS Connector
Input/Output Impedance	50 Ohm nominal
MTBF	>100,000 hours

### Environmental Specifications:

Item	Specification
Operating Temperature Range	-40°C to+70°C
Relative Humidity	5% to 99%
Weather Protection	IP-68
Lightning Protection	BTS Port: 8/20uS 10kA Antenna Port: 1/4 wavelength grounded (DC GND)
Operational	ETS 300 019-1-4
Transportation	ETS 300 019-1-2
Storage	ETS 300 019-1-11

### Mechanical Specifications:

Item	Specification
Dimension	312.0 x 127.0 x 101.0 mm 12.28 x 5.0 x 3.98 inches
Mounting Points	See Outline Drawing
RF Connector	BTS & Antenna Ports: 7/16 DIN Female Test Port: Type-N Female
Connector Position	See Outline Drawing
Finish	Gray color coating
Mounting Brackets	Included, for pole and wall mounting

### Accessories:

Item	Model Number
Bias-T Power injector	8-038480
TTA Control Unit	438-83B-23005-CU-S

Outline Drawing:

