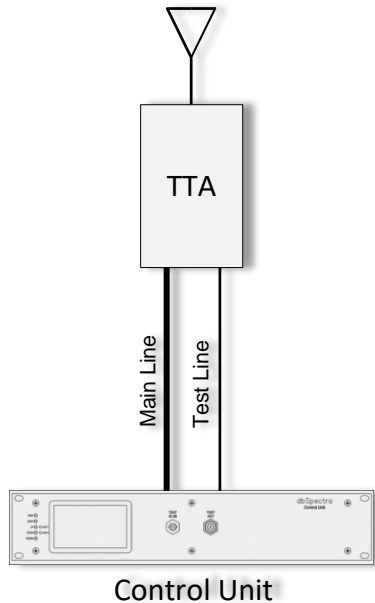


NPD2537ASYSD

900 MHz Motorola Tower Top Amplifier System (-48 VDC Model)



NPD2537ASYSD Complete System

System Features and Benefits

- ❖ System low noise figure performance.
- ❖ Microprocessor controlled setup and monitoring.
- ❖ Test port for receiver sensitivity testing with ability to switch between antenna and a load for Effective Receiver Sensitivity (ERS) measurement.
- ❖ Dual quadrature coupled amplifiers (A & B) in TTA.
- ❖ Automatic TTA LNA Bypass Mode in alarm condition
- ❖ Antenna Test – Allows sweep testing of receive antenna for site baseline measurements.
- ❖ Monitors site spectrum for high levels carriers to provide SNMP or dry contact alarms if levels exceed -35 dBm.
- ❖ Factory test data stored and accessible via user interface.
- ❖ Computer-assisted receiver gain setup.
- ❖ System Model includes NPD2537A-TTA Tower Top Amplifier and NPD2537A-CUD Control Unit

TTA System Specifications

(Top and bottom units directly connected, no cable loss.)

Frequency Range	896-901 MHz
System Models	Single Branch models available from 8-16 channels.
System Gain	Adjustable: ≥ 20 dB to ≤ 5 dB
System Gain Flatness across frequency range	≤ 2.0 dB (Excluding post filter cellular notch filter.)
System Noise Figure	≤ 4.0 dB
System Input IP3	+13 dBm (+/- 1 dB)
System TX Band Rejection	≥ 110 dB at 935-940 MHz <i>Includes post filter providing >70 dB @894 with 10dB of fly-back</i>
Antenna Test Mode	Yes
Test Mode	Yes, with internal 50-ohm termination
Test Port Coupling (Test into Antenna in)	30 dB \pm 2 dB (low directivity)
Test Port Coupling Flatness	≤ 1.0 dB (Excluding post filter cellular notch filter.)
IP interface	Yes, with SNMP V2c/V3 alarms, web user interface for setup and control.
Dry Contact Alarms	Yes
Internal Storage of Factory Test Data	Yes
High Level Carrier Monitor	Yes, -35 dBm Composite
Attenuation Range	15 to 0 dB, adjustable in .25 dB increments
Power Input	-48VDC
Post Filter	Order Separately (MWF9BMCN-N)

NPD2537ASYSD

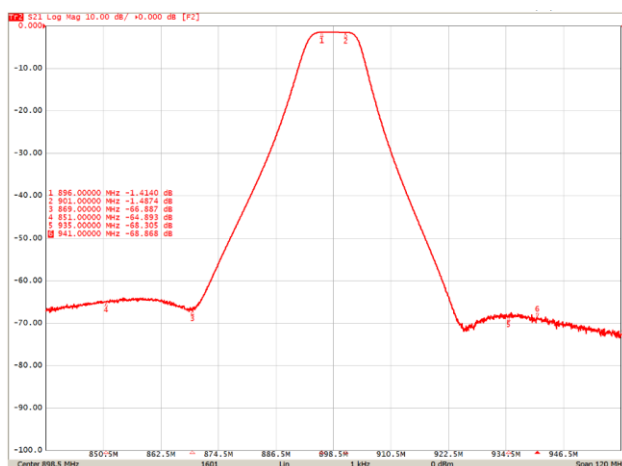
900 MHz Motorola Tower Top Amplifier System (-48 VDC Model)



NPD2537A-TTA Tower Top Unit

TTA Features and Benefits

- ❖ Dual redundant quadrature coupled LNA's.
- ❖ Automatic bypass during LNA alarm condition.
- ❖ Low noise figure performance.
- ❖ Test port standard for accurate receiver sensitivity with ability to switch between the antenna and load.
- ❖ Compact weatherproof housing.
- ❖ Lightning protection on all ports.



TTA Filter

>60 dB isolation at 800/900 MHz TX Bands

TTA Specifications (Top Unit Only)

Frequency Range	896-901 MHz
Passband	5 MHz
Gain	>21 dB (-30°C to +60°C)
Noise Figure	≤ 2.5 dB
TTA, TX Band Rejection	> 60 dB at 935 -940 MHz > 60 dB at 851 -869 MHz
Automatic Bypass Mode	Yes
Test Port	Yes
Return loss, all ports	>14 dB
Power Requirements	18 & 24 VDC Derived from RF cable
Operating Current	< 150 mA
Surge Protection	20 KA ANSI C62.1, 8/20 waveform, 110 J
Low Noise Amplifier	
<ul style="list-style-type: none"> • Amplifier Type 	Quadrature Coupled
<ul style="list-style-type: none"> • Redundant LNAs 	Yes (Amps A and B)
Test Port Switching	Yes (50 ohm load termination)

Mechanical Specifications (TTA)

Connectors (all ports)	N-Type (Female) With 2" center to center min spacing
Housing	Aluminum, NEMA 3X
Temperature Range	-30 to + 60°C (meets specifications) -40 to +70°C (degraded specifications)
Dimensions	10.75 in. X 4.0 in. X 6.5 in. (without brackets)
Weight	10 lbs.
Grounding Stud	2.25 in for two-hole lug configuration

NPD2537ASYSD

900 MHz Motorola Tower Top Amplifier System (-48 VDC Model)



NPD2537A-CUD Control Unit

Control Unit Features and Benefits

- ❖ 8 – 16 Channels in a 2 RU chassis (expandable in 8 channel increments)
- ❖ Large front panel display for local monitoring and configuration.
- ❖ Post filter ports to connect an external filter for additional selectivity.
- ❖ Test Port for accurate receiver testing.
- ❖ Antenna Test Port for antenna return loss testing.
- ❖ Pre attenuator (0 – 15 in 0.25 dB steps)
- ❖ Self-terminating splitter outputs
- ❖ IP Interface:
 - Web Interface for remote monitoring and configuration
 - TLS IP security layer
 - SNMP V2c & V3

Control Unit Specifications (Bottom Unit)	
Frequency Range	896-901 MHz
Number of RX Output Ports	Stand Alone: 8 – 16 Channels <i>(Expandable in 8 Channel increments.)</i>
Low Noise Amplifier	
Amplifier Type	Quadrature Coupled
Input/output Return Loss	≥14 dB
Test Port	Yes
Antenna Test Port	Yes
Gain	0 dB with 0 dB attenuation
Noise Figure	7.1 dB with 0 dB attenuation
RX – RX Port Isolation	≥20 dB
Power Input	-48 VDC
Output DC Voltages	Main Line port: 24 VDC Max Test Port: 6 VDC
User Interface	Web browser or front panel touchscreen display
IP Interface	TLS security Layer, SNMP Alarms V2C/V3
Dry Contact Alarm	Form-C Contacts
Mechanical Specifications	
RF Connectors	<ul style="list-style-type: none"> ✓ RF Input: N Female ✓ Output: BNC Female (rear) ✓ Test Port In: BNC Female (front) ✓ Test Port Out: N Female (rear) ✓ Antenna Test: N Female(front) ✓ RF Post Filter Ports: N Female (rear)
IP Interface Connector	RJ45
Dry Contact Alarm Connector	Block Type
Grounding Stud	(2X) 0.25" for 2-hole lugs
Rack Height (RU)	2 RU
Temperature Range (no degradation)	0°C to +50° C