



# 225 MHz~2.6 GHz Multi-Band BDA with Harmonic Filtering 20~50 Watt Item # 70-126

## Auto Selection Multi-Band BDA with Harmonic Filtering

This multi band amplifier is a wide band amplifier that covers 225 MHz to 2600 MHz with auto band selection. Equipped with high-speed switching circuit, the unit allows use of high-speed radios. Key features include:

- Auto TX signal detection and band switching
- Requires no radio interface connection
- Waveforms TSM, Katana, ANW2C
- Compatibility with all modern and emerging MANET waveforms
- Failsafe bypass (during power failure)
- Band indication LEDs
- VSWR Protection (activate Bypass Mode)
- Manual TX control Optional 5V or 3V TTL bypass
- Available temperature sensor readings with LED indication

### ELECTRICAL SPECIFICATIONS

|                                            |                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Range                            | 225~2600 MHz<br>BAND#1: 225-300 MHz (UP TO 50W)<br>BAND#2: 315-512 MHz (UP TO 50W)<br>BAND#3: 698-970 MHz (UP TO 20W)<br>BAND#4: 1250-2000 MHz (UP TO 30W)<br>BAND#5: 2100-2600 MHz (UP TO 30W)                                                                                                                                   |
| Operating Mode                             | TDD, Time Division Duplex                                                                                                                                                                                                                                                                                                         |
| Tx Peak Power                              | 50 dBm                                                                                                                                                                                                                                                                                                                            |
| Transmit Gain @ 1W                         | Band#1: 225-300 MHz = 12.2 dB (+/- 2 dB)<br>Band#2: 315-512 MHz = 12.9 dB (+/- 2 dB)<br>Band#3: 698-970 MHz = 8 dB (+/- 2 dB)<br>Band#4: 1250-2000 MHz = 10.6 dB (+/- 2 dB)<br>Band#5: 2100-2600 MHz = 12.2 dB (+/- 2 dB)                                                                                                         |
| Tx Input Power                             | 20 dB min, 34 dB max.                                                                                                                                                                                                                                                                                                             |
| Rx Gain                                    | 12 ± 2 dB                                                                                                                                                                                                                                                                                                                         |
| Noise Figure                               | 2.5 dB typical                                                                                                                                                                                                                                                                                                                    |
| T/R Switching                              | Auto switching at <1 µs                                                                                                                                                                                                                                                                                                           |
| Band Switching                             | <12 µs                                                                                                                                                                                                                                                                                                                            |
| Bypass Signal Loss                         | <1dB                                                                                                                                                                                                                                                                                                                              |
| 2 <sup>nd</sup> & 3 <sup>rd</sup> Harmonic | 68 dBc @ 250 MHz, 60 dBc or better @<br>Band#1: 225-300 MHz<br>69 dBc @ 400 MHz, 60 dBc or better @<br>Band#2: 315-512 MHz<br>57 dBc @ 915 MHz, 53 dBc or better @<br>Band#3: 698-970 MHz<br>61.8 dBc @ 1450 MHz, 58 dBc or better @<br>Band#4: 1250-2000 MHz<br>62.5 dBc @ 2400 MHz, 60 dBc or better @<br>Band#5: 2100-2600 MHz |
| LED Indicators                             | Red for Rx (default mode), Green for Tx Auto band indication LEDs<br>Temperature <70 °C LED Green<br>Temperature >70 °C LED Red                                                                                                                                                                                                   |
| DC Power                                   | 48VDC, 4A Max. (10-36 VDC version available)                                                                                                                                                                                                                                                                                      |
| Power Consumption                          | With 48VDC, 100mA Rx, 3.5A @ 20W Tx                                                                                                                                                                                                                                                                                               |
| Operating Temperature                      | -40 °C to +70 °C                                                                                                                                                                                                                                                                                                                  |
| Temp Sensor                                | Optional – Indicator LED<br>Green <70 °C, Red >70 °C                                                                                                                                                                                                                                                                              |



\*The housing may appear slightly different than the illustration



### MECHANICAL SPECIFICATIONS

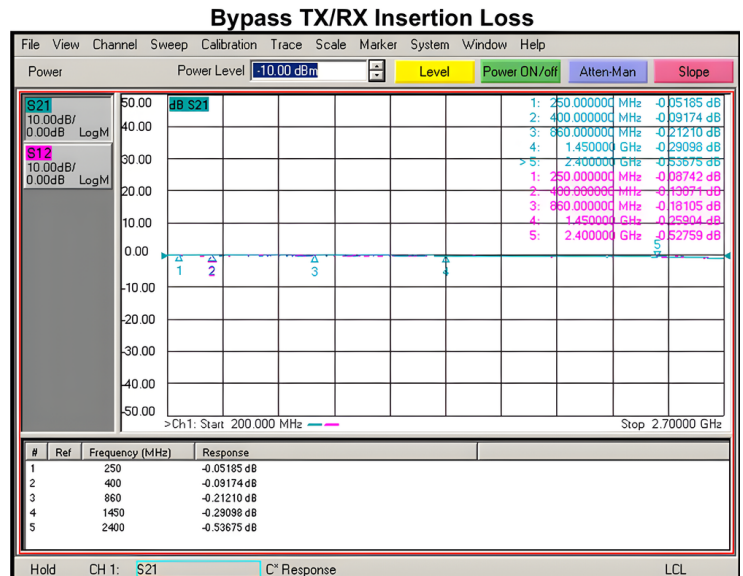
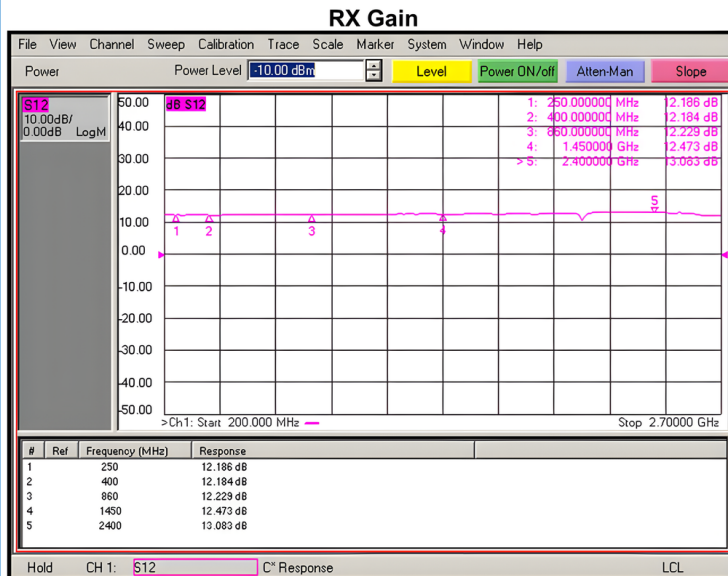
|            |                                                                                                                                    |
|------------|------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions | 10.2" (26 cm) x 5.4" (13.6 cm) x 1.8" (4.6 cm) w/o connectors<br>Base plate has four corner flanges with holes for mounting screws |
| Connector  | Radio Input: TNC-F, ANT Output: N-F                                                                                                |
| Weight     | Approx. 5 lb (2.27 kg)                                                                                                             |





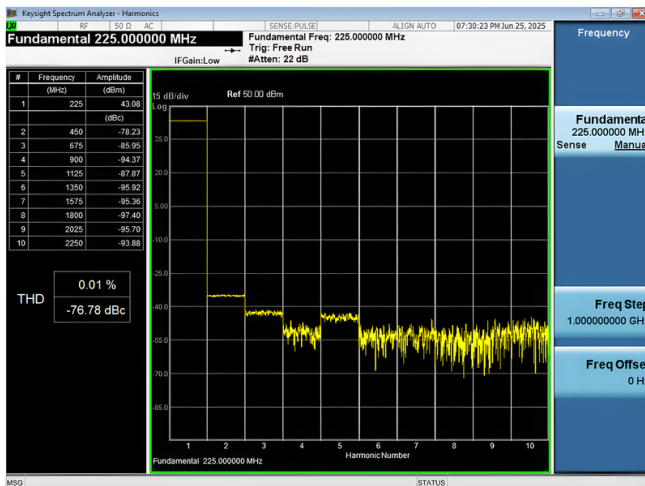
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## PERFORMANCE CURVES

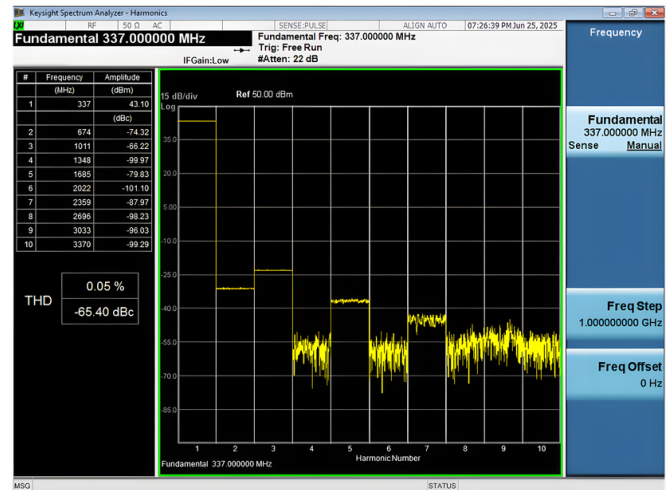


## HARMONICS PLOTS

@225MHz



@337MHz

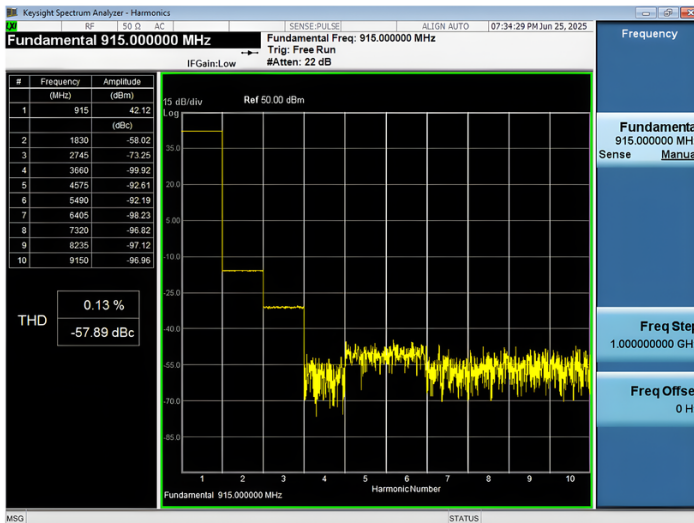




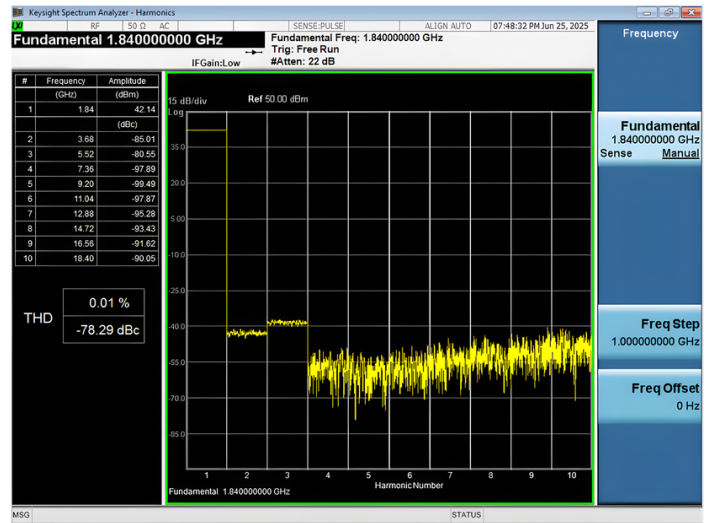
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## HARMONICS PLOTS

@915MHz



@1840MHz



@2235MHz

