



5300 Beethoven Street, Los Angeles, CA 90066  
 TEL: (310)306-5556 • FAX: (310)821-7413  
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**MODEL 4143**  
**6.0-18 GHz**  
**100 WATTS**  
**LINEAR POWER RF AMPLIFIER**

### Solid State Broadband High Power RF Amplifier

The 4143 is a 100 Watt Solid State broadband amplifier that covers the 6.0-18 GHz frequency range. This amplifier utilizes Class AB linear power devices that provide low harmonics, high gain, and excellent stability

Due to robust engineering and employment of the most advanced devices and components, this amplifier achieves high efficiency operation with proven reliability, Like all OPHIR<sub>RF</sub> amplifiers, the 4143 comes backed by Ophir RF's commitment to total customer satisfaction.

|                             | <u>Parameter</u>       | <u>Specification @ 25° C</u>                                     |
|-----------------------------|------------------------|--|
| <b><u>Electrical</u></b>    |                        |  |
| 1                           | Frequency Range        | 6.0-18 GHz   |
| 2                           | Nominal Output Power   | 6.0-17.0 GHz 100 Watts Nominal<br>17.0-18.0 GHz 60 Watts Nominal |
| 3                           | P1dB Output Power      | 25 Watts Nominal   |
| 3                           | Small Signal Gain      | +50 dB Minimum   |
| 4                           | Power Gain Flatness    | ± 4.0 dB Maximum   |
| 5                           | IP <sub>3</sub>        | +62 dBm typical  |
| 6                           | Input VSWR             | 2:1 max  |
| 7                           | Harmonics              | -20dBc Nominal @ 60 Watts  |
| 8                           | Spurious Signals       | < -60dBc Nominal @ 60 Watts                                      |
| 9                           | Input/Output Impedance | 50 Ohms nominal  |
| 10                          | AC Input Power         | 1500 Watts Maximum   |
| 11                          | AC Input               | 180-240 VAC Single Phase   |
| 12                          | RF Input               | 0 dBm Nominal for full rated Power                               |
| 13                          | RF Input Signal Format | CW/AM/FM/PM/Pulse  |
| 14                          | Class of Operation     | Class AB   |
| <b><u>Mechanical</u></b>    |                        |  |
| 15                          | Dimensions (5RU)       | 19" x 8.75" x 26"  |
| 16                          | Weight                 | 125 lb. max  |
| 17                          | Connectors             | Type-N   |
| 18                          | Grounding              | Chassis  |
| 19                          | Cooling                | Internal Forced Air  |
| <b><u>Environmental</u></b> |                        |  |
| 20                          | Operating Temperature  | 0° C to +50° C   |
| 21                          | Operating Humidity     | 95% Non-condensing   |
| 22                          | Operating Altitude     | Up to 10,000' Above Sea Level                                    |
| 23                          | Shock and Vibration    | Normal Truck Transport   |

*Specifications subject to change without notice*



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|                                      | <u>Parameter</u>   |
|--------------------------------------|--|
| <b><u>Front Panel Controller</u></b> |  |
| 24                                   | Forward Power Monitoring   |
| 25                                   | Reflected Power Monitoring   |
| 26                                   | Gain Control (25 dB dynamic range of adjustment)   |
| 27                                   | Fault Status   |
| 28                                   | Full Protection Of any VSWR Condition, Open or Short, any Phase.   |
| 29                                   | Remote Control Access via the Ethernet, RS-232, or IEEE-488 Communications ports   |
| 30                                   | Integrated Automatic Leveling Control to allow end-user to maintain output even with variances in temperature, or input RF level |
| 31                                   | Standby/Enable Control   |
| 32                                   | Front Panel Display for easy viewing of System Status Locally  |
| 33                                   | Keypad buttons for full local control  |
| <b><u>Circuit Protections</u></b>    |  |
| 34                                   | Thermal Overload   |
| 35                                   | Over Current   |
| 36                                   | Over Voltage   |
| 37                                   | Open or Short VSWR Conditions  |
| <b><u>Circuit Control</u></b>        |  |
| 38                                   | Standby (amplifier disable)  |
| 39                                   | Gain/power setting with 25dB range   |
| 40                                   | VSWR protection Reset  |
| 41                                   | ALC On/ Off  |
| <b><u>Circuit Indications</u></b>    |  |
| 42                                   | Forward Power  |
| 43                                   | Reflected power  |
| 44                                   | VSWR Fault   |
| 45                                   | Temp Fault   |
| 46                                   | Gain Setting (VVA) percentage  |

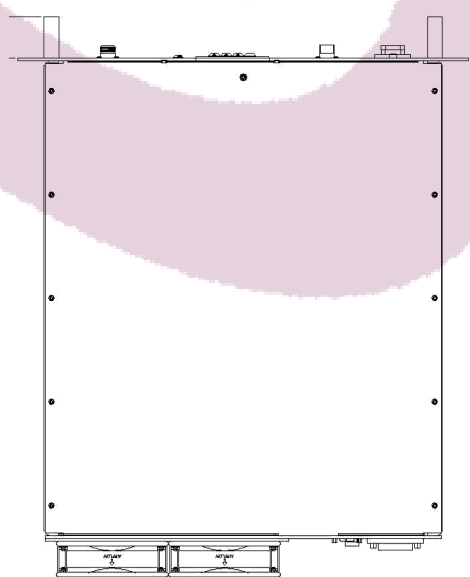
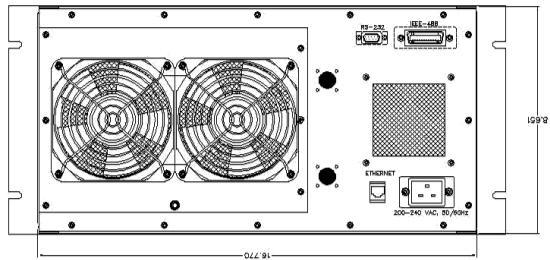
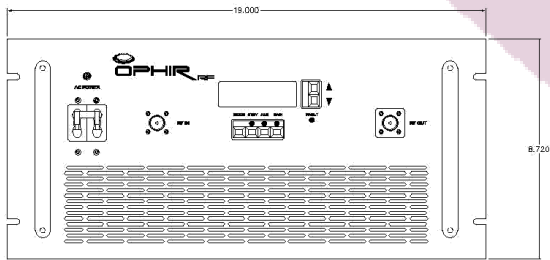
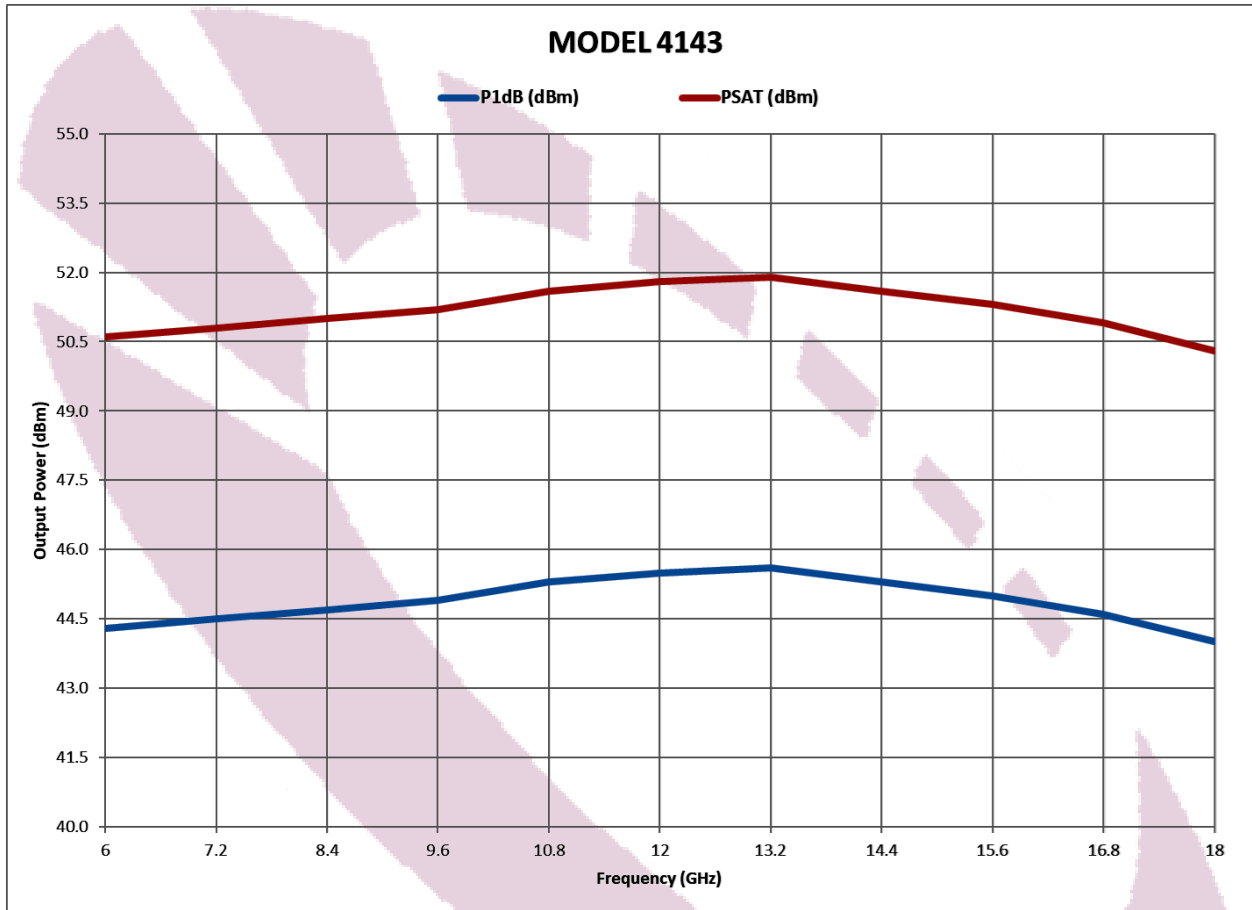
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**ORDERING MODELS**

RE Rear RF Connector model with Front Panel Controller Ethernet, IEEE-488 and RS232