



5300 Beethoven Street, Los Angeles, CA 90066  
 TEL: (310)306-5556 • FAX: (310)821-7413  
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**MODEL 4153**  
**2.5-7.5 GHz**  
**1000 WATTS**  
**LINEAR POWER RF AMPLIFIER**

**Solid State Broadband High Power RF Amplifier**

The 4153 is a 1000 Watt broadband amplifier that covers the 2.5-7.5 GHz frequency range. This small and lightweight amplifier utilizes Class A linear power devices that provide an excellent 3<sup>rd</sup> order intercept point, high gain, and a wide dynamic range.

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 4153 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.

	Parameter	Specification @ 25° C			
		Minimum	Nominal	Maximum	Unit
<b><u>Electrical</u></b>					
1	Frequency Range	2.5		7.5	GHz
2	Power at P <sub>SAT</sub>	800	1000		Watts
3	Power at P <sub>1dB</sub>		600		Watts
4	Small Signal Gain	61			dB
5	Gain Flatness			+4.5	dB
6	IP <sub>3</sub>		64		dBm
7	Input VSWR			2:1	Ratio
8	Harmonics @ 1000W	-12	-20		dBc
9	Spurious Signal @ 1000W		-60		dBc
10	Input/Output Impedance		50		Ohms
11	AC Input Power			10000	Watts
12	AC Input	208 VAC (± 10%) 3-Phase			
13	RF Input (No Damage)			+3	dBm
14	RF Input Signal Format	CW/AM/FM/PM/Pulse			
15	Class of Operation	Class A			
<b><u>Mechanical</u></b>					
16	Dimensions H x W x D	72" x 24" x 26"(H x W x D)			
17	Weight	600			Lbs.
18	RF Connectors	Type-N Female Input WRD250 Output			
19	Grounding	Chassis			
20	Cooling	Internal Forced Air			
<b><u>Environmental</u></b>					
21	Operating Temperature	0		50	° C
22	Operating Humidity	95% Non-condensing			
23	Operating Altitude	Up to 10,000' Above Sea Level			
24	Shock and Vibration	Normal Truck Transport			

Specifications subject to change without notice



0624 Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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### **FRONT PANEL CONTROLLER**

- ◇ - Forward Power Monitoring (dBm or Watts)
- ◇ - Reflected Power Monitoring (dBm or Watts)
- ◇ - Gain Control (20 dB dynamic range of adjustment)
- ◇ - Fault Status
- ◇ - Full Protection Of any VSWR Condition, Open or Short, into any Phase Angle
- ◇ - Remote Control Access via the Ethernet, RS-232, or IEEE-488 Communications ports
- ◇ - Integrated Automatic Leveling Control to allow end-user to maintain output even with variances in temperature, or input RF level
- ◇ - Standby/Enable Control
- ◇ - Front Panel Display for easy viewing of System Status Locally
- ◇ - Keypad buttons for full local control

### **CIRCUIT PROTECTIONS**

- ◇ - Thermal Overload
- ◇ - Over Current
- ◇ - Over Voltage
- ◇ - Open or Short VSWR Conditions

### **CIRCUIT CONTROL**

- ◇ - Standby (amplifier disable)
- ◇ - Gain/power setting with 20dB range
- ◇ - VSWR protection Reset
- ◇ - ALC On/ Off

### **CIRCUIT INDICATION**

- ◇ - Forward Power
- ◇ - Reflected power
- ◇ - VSWR Fault
- ◇ - Temp Fault
- ◇ - Gain Setting (VVA) percentage

### **RFPA SYSTEM OPTIONS**

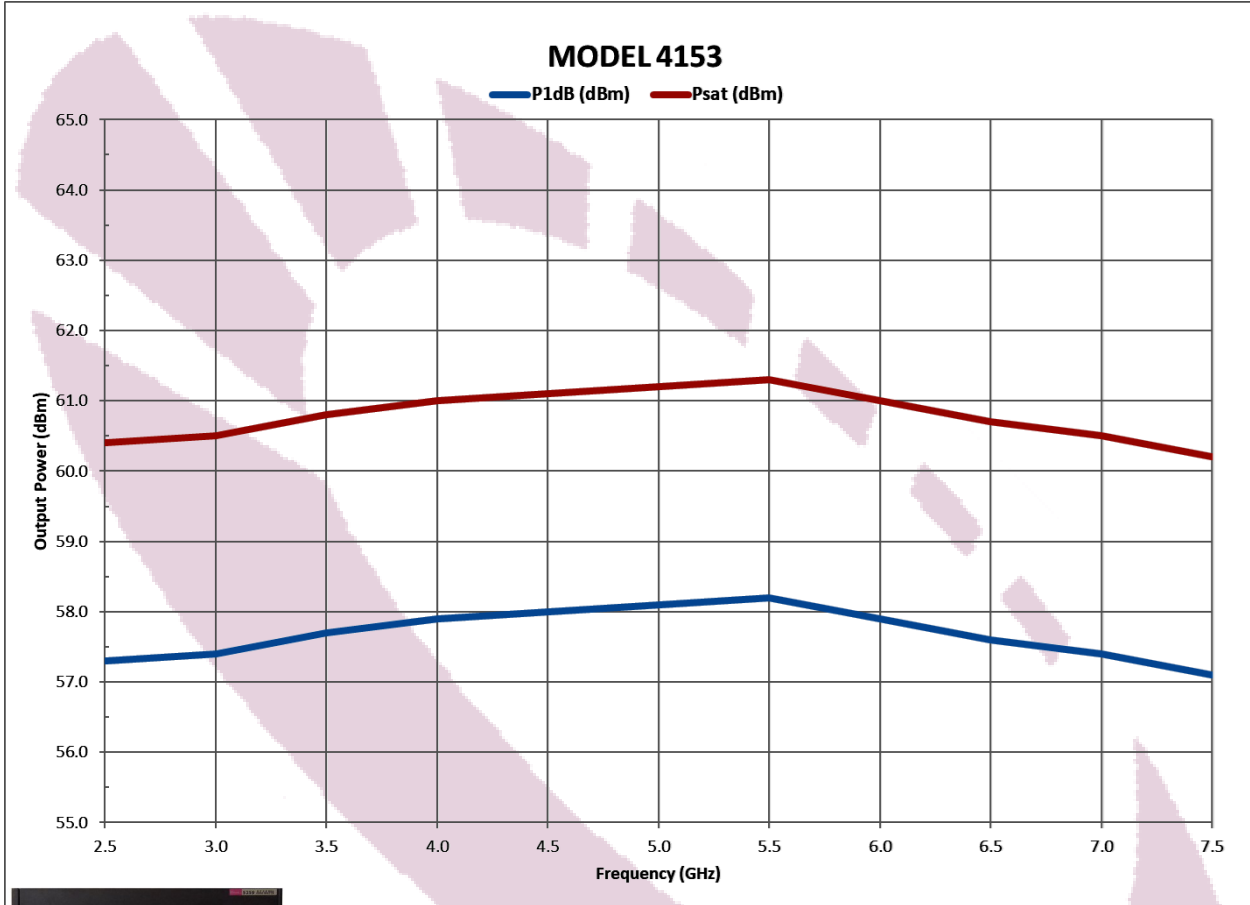
- ◇ - Switched Filter Bank
- ◇ - Input Power Requirements
- ◇ - Ruggedized Version
- ◇ - Cabinet Requirements
- ◇ - Outdoor Version
- ◇ - Sample Ports
- ◇ - Racking Options
- ◇ - Front Panel Controller ("E" Option)
- ◇ - **Consult Factory with Specific Requirements**

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**ORDERING MODELS**

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

