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**MODEL 5138**  
**1.0 - 2.0 GHz**  
**2500 WATTS**  
**LINEAR POWER RF AMPLIFIER**

**Solid State  
 Broadband High Power  
 RF Amplifier**

The 5138 is a 2500 Watt broadband amplifier that covers the 1.0 – 2.0 GHz frequency range. This Compact RF amplifier utilizes Class A/AB 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 5138 comes with an extended multiyear warranty backed by Ophir RF's commitment to total customer satisfaction.

	Parameter	Specification @ 25° C
<b>Electrical</b>		
1	Frequency Range	1.0 – 2.0 GHz
2	Saturated Output Power	2500 Watts typ.
3	Small Signal Gain	+65 dB min
4	Power Flatness	+/- 4.0 dB max with no ALC +/- 1.0 dB max with internal leveling
5	IP <sub>3</sub>	+68 dBm typical
6	Input VSWR	2:1 max
7	Harmonics	-20 dBc typical
8	Spurious Signals	< -60 dBc typical
9	Input/Output Impedance	50 Ohms nominal
10	AC Input Power	20 kW max
11	AC Input	208VAC 3Ø (Three Phase)* *Please specify AC Power requirements with factory
12	RF Input	+10 dBm max
13	RF Input Signal Format	CW/AM/FM/PM/Pulse
14	Class of Operation	A/AB
<b>Mechanical</b>		
15	Dimensions	Height 90cm Width: 205cm Depth: 105cm
16	Weight	432 kg. max
17	Connectors	Type-N (RF Input) EIA 1 5/8 (RF Output)
18	Grounding	Chassis
19	Cooling	Internal Forced Air
<b>Environmental</b>		
20	Operating Temperature	0° C to +40° 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



**R (Rear Connector) VERSION SHOWN**

**ORDERING MODELS**

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



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**FRONT PANEL CONTROLLER FEATURES (Optional)**

- ◇ Forward Power Monitoring
- ◇ Reflected Power Monitoring
- ◇ Gain Control (Continuously Variable VVA 20dB)
- ◇ 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, phase or input RF level
- ◇ Standby/Enable Control
- ◇ Front Panel Display for easy viewing of System Status Locally
- ◇ Keypad buttons for full local control

**RFPA SYSTEM OPTIONS**

- ◇ Switched Filter Bank
- ◇ Input Power Requirements
- ◇ Ruggedized Version
- ◇ Cabinet Requirements
- ◇ Outdoor Version
- ◇ Sample Ports
- ◇ Racking Options

**CIRCUIT INDICATIONS**

*(WITH FRONT PANEL CONTROLLER)*

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

**CIRCUIT CONTROL**

*(WITH FRONT PANEL CONTROLLER)*

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

**CIRCUIT PROTECTIONS**

- ◇ Thermal Overload
  - ◇ Over Current
  - ◇ Over Voltage
  - ◇ Open or Short VSWR Conditions
- (With Front Panel Controller)*

**TYPICAL PERFORMANCE DATA FOR MODEL 5138**

Freq (MHz)	RF Output (dBm)
1000	64.3
1100	64.6
1200	64.6
1300	64.6
1400	64.4
1500	64.4
1600	64.9
1700	64.5
1800	64.5
1900	64.7
2000	64.4

