



5300 Beethoven Street, Los Angeles, CA 90066  
 TEL: (310)306-5556 • FAX: (310)821-7413  
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**MODEL 5138**  
**1000-2000 MHz**  
**2000 WATTS**  
**LINEAR POWER RF AMPLIFIER**

### Solid State Broadband High Power RF Amplifier

The 5138 is a very high power broadband amplifier that covers the 1000-2000 MHz frequency range. This amplifier utilizes Class A linear Gallium Nitride (GaN) power devices that provide an excellent 3<sup>rd</sup> order intercept point, high gain, a wide dynamic range, and an industry leading P1dB performance.

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.

	<u>Parameter</u>	<u>Specification @ 25° C</u>
<b><u>Electrical</u></b>		
1	Frequency Range	1000-2000 MHz
2	Power at P <sub>SAT</sub>	2000 Watts Nominal
3	Power Output @ P <sub>3dB</sub>	1750 Watts Minimum
4	Power Output @ P <sub>1dB</sub>	1500 Watts Minimum
5	Small Signal Gain	+64 dB Minimum
6	Gain Flatness	± 2.0 dB Maximum
7	IP <sub>3</sub>	+66 dBm typical
8	Input VSWR	2:1 max
9	Harmonics	-15 dBc min @ 1500 Watts
10	Spurious Signals	< -60 dBc typical @ 1500 Watts
11	Input/Output Impedance	50 Ohms nominal
12	AC Input Power	12,000 Watts Maximum
13	AC Input	208 VAC, three phase 3Ø
14	RF Input	0 dBm max
15	RF Input Signal Format	CW/AM/FM/PM/Pulse
16	Class of Operation	Class A
<b><u>Mechanical</u></b>		
17	Dimensions	31" x 24" x 26" (H x W x D) 79 x 61 x 67 (H x W x D) cm
18	Weight	340 lbs. / 154 Kg
19	RF Connectors	Type-N Female Input Type 1-5/8 EIA Output
20	Grounding	Chassis
21	Cooling	Internal Forced Air
<b><u>Environmental</u></b>		
22	Operating Temperature	0° C to +50° C
23	Operating Humidity	95% Non-condensing
24	Operating Altitude	Up to 10,000' Above Sea Level
25	Shock and Vibration	Normal Truck Transport



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### 5138 SPECIAL FEATURES

- ◇ - Safety Interlock
- ◇ - Forward Power Sample Port
- ◇ - Reflected Power Sample Port
- ◇ - Expanded Documentation to include Maintenance, Troubleshooting, and repair



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## FRONT PANEL CONTROLLER FEATURES

- ◇ - Forward Power Monitoring
- ◇ - Reflected Power Monitoring
- ◇ - Gain Control (20 dB dynamic range of adjustment)
- ◇ - Fault Status
- ◇ - Full Protection Of any VSWR Condition, Open or Short, into any Phase
- ◇ - 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 INDICATIONS

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



## 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