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## MODEL 5068-001

**200 - 450 MHz**  
**300 WATTS**

### Solid State Broadband High Power RF Amplifier

The 5068-001 is a 300 Watt broadband amplifier that covers the 200 – 450 MHz frequency range. This small and lightweight 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 5068-001 comes with an extended

### CIRCUIT PROTECTIONS

- ◇ Thermal Overload
- ◇ Over Current
- ◇ Over Voltage
- ◇ VSWR Foldback Protection

### INCLUDED FEATURES

- ◇ RS-232 Communications Interface
- ◇ Rear Panel Connectors
- ◇ ALC + Gain Adjust (20 dB nominal)
- ◇ LCD Digital Display
- ◇ Rack Mountable

	Parameter	Specification @ 25° C
<b>Electrical</b>		
1	Frequency Range	200 – 450 MHz
2	Saturated Output Power	300 Watts typical
3	Power Output @ 1dB Comp.	200 Watts min
4	Small Signal Gain	+56 dB min
5	Gain Flatness	± 2.0 dB
6	IP <sub>3</sub>	+59 dBm typical
7	Input VSWR	2:1 max
8	Harmonics	-20 dBc typical @ 200 Watts
9	Spurious Signals	> -60 dBc typical @ 200 Watts
10	Input/Output Impedance	50 Ohms nominal
11	AC Input Power	1600 Watts max
12	AC Input	100 – 240 VAC, single phase
13	RF Input	0 dBm max
14	Turn on time / Turn off time	5 µsec / 3 µsec typical
15	Class of Operation	AB
<b>Mechanical</b>		
16	Dimensions	19" x 7.0" x 20"
17	Weight	50 lb. max
18	RF Connectors	Type-N (rear)
19	Blanking Connector	BNC (TBD)
20	Grounding	Chassis
21	Cooling	Internal Forced Air
<b>Environmental</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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### Interface Controls and Alarms

**Fault Alarms** – VSWR alarm, when the forward VSWR or reverse VSWR is higher than the VSWR alarm set point

**The following parameters can be set manually and displayed using the front panel buttons and screen:**

1. VVA (voltage variable attenuator) level on VVA%.
2. VSWR alarm point (for input and output VSWR)
3. Standby key – this key should place the unit into standby or online mode.
4. ALC key – should turn automatic level control on or off.
5. Mode key – should allow toggling through all of the following:
  - Forward and reflected power
  - Gain control
  - VSWR cut off in dB
  - VVA voltage variable attenuator voltage in %

### Remote Control via RS-232

List of commands to be used with the amplifier:

**Mode xxx** – sets mode of unit. When **xxx** is ALC or VVA

**Mode?** – should return the current mode of unit which is one of the following:

Online ALC, Online VVA, Standby ALC, Standby VVA

**Standby** – places unit into standby mode

**Online** – places unit into online mode

**VVA\_Level xx.x** – set the current VVA level. xx.x is a floating point value, conforming to standard IEEE nomenclature

**VVA\_Level?** – return current VVA level

**ALC\_Level xx.x** – set the current ALC level. xx.x is a floating point value

**ALC\_Level?** – return current ALC in %

**FAULTS?** – returns any current faults in the system. If no error – the reply will consist of a string that contains a single space.  
Errors\_VSWR\_Fault, Over\_Temperature, Monitor\_fault,  
VVA\_Level\_Fault