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**MODEL 4039R**

**292 - 320 MHz**  
**250 WATTS**  
**LINEAR POWER RF AMPLIFIER**

**Solid State Power RF Amplifier**

The 4039R is a 250 Watt RF amplifier that covers the 292 – 320 MHz frequency range. This small and light-weight 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 4039R comes with an extended multi-year warranty.

**High Amplifier**

	<u>Parameter</u>	<u>Specification @ 25° C</u>
<b><u>Electrical</u></b>		
1	Frequency Range	292 – 320 MHz
2	Saturated Output Power	250 Watts typical
3	Power Output @ 1dB Comp.	200 Watts min
4	Gain (Keyed) *	+53 dB min
5	Gain (Un-Keyed) *	0 dB max
6	TX KEY line *	Ground = Keyed
7	TX Rise (Turn-on) Time	< 100 us
8	TX Fall (Turn-off) Time	< 100 us
9	Noise Figure	< 10 dB typical
10	Input VSWR	2:1 max
11	Harmonics	-20 dBc typical @ 200 Watts
12	Spurious Signals **	> -60 dBc typical @ 200 Watts
13	Input/Output Impedance	50 Ohms nominal
14	AC Input	100 – 240 VAC, single phase
15	RF Input	0 dBm
16	Class of Operation	AB
<b><u>Mechanical</u></b>		
17	Dimensions	19" x 5.25" x 20"
18	Weight	40 lb. max
19	Connectors	Type-N
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

**CIRCUIT PROTECTIONS**

- ◇ Thermal Overload
- ◇ Over Current
- ◇ Over Voltage

**INCLUDED FEATURES**

- ◇ Transmit key indicator LED
- ◇ 20 dB Variable Gain Control (Front)

**\* Spurious Test Procedure**

- Turn GAIN Control on Front Panel Fully CW (Max Gain setting).
- Set RF Input Power to 0dBm at 300 MHz.
- “KEY” amplifier and Observe the RF Output on a Spectrum Analyzer.
- While adjusting the GAIN Control through its full range, examine the RF Output Spectrum from 30kHz through 1GHz per Specification.

**\*\* Delta KEY and Un-KEY Shutdown Test Procedure**

- Turn GAIN Control on Front Panel Fully CW (Max Gain setting).
- Set RF Input Power to 0dBm at 300 MHz.
- “KEY” amplifier and measure ≥ 53dBm RF Output Power.
- “Un-KEY” amplifier and measure < 0dBm RF Output Power.