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MODEL 5303093

20 – 500 MHz
100 WATTS
LINEAR POWER RF AMPLIFIER

Solid State Broadband High Power RF Amplifier

The 5303093 is a 100 Watt broadband amplifier that covers the 20 – 500 MHz frequency range. This small and lightweight amplifier utilizes Class A/AB linear power devices that provide an excellent 3rd 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_{RF} amplifiers, the 5303093 comes with an extended multiyear warranty.

	Parameter	Specification @ 25° C
Electrical		
1	Frequency Range	20 – 500 MHz
2	Saturated Output Power	120 Watts typical
3	Power Output @ 1dB Comp.	80 Watts min
4	Small Signal Gain	+51 dB min
5	Gain Flatness	± 1.5 dB max
6	IP ₃	+55 dBm typical
7	Input VSWR	2:1 max
8	Harmonics	-15 dBc typical @ 80 Watts
9	Spurious Signals	> -60 dBc typical @ 80 Watts
10	Input/Output Impedance	50 Ohms nominal
11	DC Input Current	15 Amps max
12	DC Input	28 VDC nominal
13	RF Input	+0 dBm typical
14	RF Input Signal Format	CW/AM/FM/PM/Pulse
15	Class of Operation	AB
16	TTL Enable/Disable	200uS On, 10uS Off
17	Gain Control	30dB range @ 0.5dB step
18	Input Power reporting	Analog voltage 0 to 4V
19	Output Power reporting	Analog voltage 0 to 4V
20	Input power protection	Up to 20dBm Shut down @ Pin >~ 1dBm Indication through discrete pin
21	Temperature Protection	Shut down @ Case temperature > 85°C
22	Current limit	Shut down @ I > 20A
23	Open/short protection	Shut down Indication through discrete pin Reset through discrete pin

Specifications subject to change without notice.



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DB15 pin assignments

1	S0
2	S1
3	S2
4	S3
5	S4
6	S5
7	Ground
8	Input overdrive alarm: TTL-Hi
9	VSWR: TTL-Hi
10	On/Off: En :TTL-low Disable :TTL-Hi
11	Hi-Temperature: Tbase $\geq 85^{\circ}\text{C}$ TTL high
12	Vrf-in : Analog 0-5V
13	Vfwd : Analog 0-5V
14	Reset VSWR
15	Hi-current: TTL-Hi

	Parameter	Specification @ 25° C
Mechanical		
24	Dimensions	6.6" x 5.8" x 1"
25	Weight	5 lb. max
26	Connectors	SMA female (Input) N female (Output)
27	Grounding	Chassis
28	Cooling	Adequate Heat-sink Required
29	Operating Temperature	0° C to +50° C
30	Operating Humidity	95% Non-condensing
31	Operating Altitude	Up to 10,000' Above Sea Level
32	Shock and Vibration	Normal Truck Transport

