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## **MODEL 5803055**

0.15 - 230 MHz 25 WATTS LINEAR POWER RF AMPLIFIER

## Solid State Broadband High Power RF Amplifier

The 5803055 is a 25 Watt broadband amplifier that covers the 0.15 – 230 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 5803055 comes with an extended multiyear warranty.

Electrical         Specification @ 25° C           1         Frequency Range         0.15 − 230 MHz           2         Saturated Output Power         25 Watts typical           3         Power Output @ 1dB Comp.         15 Watts min           4         Small Signal Gain         +43 dB min           5         Gain Flatness         ± 1.5 dB max           6         IP₃         +48 dBm typical           7         Input VSWR         2:1 max           8         Harmonics         -15 dBc typical @ 15 Watts           9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/PM/PUIse           15         Class of Operation         AB           Mechanical         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling			
1         Frequency Range         0.15 – 230 MHz           2         Saturated Output Power         25 Watts typical           3         Power Output @ 1dB Comp.         15 Watts min           4         Small Signal Gain         +43 dB min           5         Gain Flatness         ± 1.5 dB max           6         IP3         +48 dBm typical           7         Input VSWR         2:1 max           8         Harmonics         -15 dBc typical @ 15 Watts           9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical         6" x 3" x 1.1"           16         Dimensions         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Coolin		<u>Parameter</u>	Specification @ 25° C
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3	1	Frequency Range	0.15 – 230 MHz
4         Small Signal Gain         +43 dB min           5         Gain Flatness         ± 1.5 dB max           6         IP <sub>3</sub> +48 dBm typical           7         Input VSWR         2:1 max           8         Harmonics         -15 dBc typical @ 15 Watts           9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical         AB           Mechanical         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	2	Saturated Output Power	25 Watts typical
5         Gain Flatness         ± 1.5 dB max           6         IP <sub>3</sub> +48 dBm typical           7         Input VSWR         2:1 max           8         Harmonics         -15 dBc typical @ 15 Watts           9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical         AB           16         Dimensions         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	3	Power Output @ 1dB Comp.	15 Watts min
6         IP <sub>3</sub> +48 dBm typical           7         Input VSWR         2:1 max           8         Harmonics         -15 dBc typical @ 15 Watts           9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical         The Company of	4	Small Signal Gain	+43 dB min
7         Input VSWR         2:1 max           8         Harmonics         -15 dBc typical @ 15 Watts           9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/PM/Pulse           15         Class of Operation         AB           Mechanical         AB           16         Dimensions         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	5	Gain Flatness	<u>+</u> 1.5 dB max
8 Harmonics -15 dBc typical @ 15 Watts 9 Spurious Signals <-60 dBc typical @ 15 Watts 10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 6 Amps max 12 DC Input 28 VDC nominal 13 RF Input +1 dBm 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation AB  Mechanical 16 Dimensions 6" x 3" x 1.1" 17 Weight 4.20 Lbs. 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Adequate Airflow Required  Environmental 21 Baseplate Temperature 0° C to +50° C	6	IP <sub>3</sub>	+48 dBm typical
9         Spurious Signals         < -60 dBc typical @ 15 Watts           10         Input/Output Impedance         50 Ohms nominal           11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical         4B         Weight           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	7	Input VSWR	2:1 max
10 Input/Output Impedance 50 Ohms nominal 11 DC Input Current 6 Amps max 12 DC Input 28 VDC nominal 13 RF Input +1 dBm 14 RF Input Signal Format CW/AM/FM/PM/Pulse 15 Class of Operation AB  Mechanical 16 Dimensions 6" x 3" x 1.1" 17 Weight 4.20 Lbs. 18 Connectors SMA female 19 Grounding Chassis 20 Cooling Adequate Airflow Required  Environmental 21 Baseplate Temperature 0° C to +50° C	8	Harmonics	-15 dBc typical @ 15 Watts
11         DC Input Current         6 Amps max           12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical         AB           16         Dimensions         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	9	Spurious Signals	< -60 dBc typical @ 15 Watts
12         DC Input         28 VDC nominal           13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical <ul> <li>16</li> <li>Dimensions</li> <li>6" x 3" x 1.1"</li> <li>17                     <li>Weight</li> <li>4.20 Lbs.</li> <li>18                     <li>Connectors                     <li>SMA female</li> <li>19                     <li>Grounding</li> <li>Chassis</li> <li>20                     <li>Cooling</li> <li>Adequate Airflow Required</li> <li>Environmental</li> <li>21</li> <li>Baseplate Temperature</li> <li>0° C to +50° C</li> </li></li></li></li></li></ul>	10	Input/Output Impedance	50 Ohms nominal
13         RF Input         +1 dBm           14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical <ul> <li>16</li> <li>Dimensions</li> <li>6" x 3" x 1.1"</li> </ul> 17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental	11	DC Input Current	6 Amps max
14         RF Input Signal Format         CW/AM/FM/PM/Pulse           15         Class of Operation         AB           Mechanical	12	DC Input	28 VDC nominal
Mechanical         AB           16         Dimensions         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	13	RF Input	+1 dBm
Mechanical         Dimensions         6" x 3" x 1.1"           17         Weight         4.20 Lbs.           18         Connectors         SMA female           19         Grounding         Chassis           20         Cooling         Adequate Airflow Required           Environmental         21         Baseplate Temperature         0° C to +50° C	14	RF Input Signal Format	CW/AM/FM/PM/Pulse
16 Dimensions 6" x 3" x 1.1"  17 Weight 4.20 Lbs.  18 Connectors SMA female  19 Grounding Chassis  20 Cooling Adequate Airflow Required  Environmental  21 Baseplate Temperature 0° C to +50° C	15	Class of Operation	AB
17 Weight 4.20 Lbs.  18 Connectors SMA female  19 Grounding Chassis  20 Cooling Adequate Airflow Required  Environmental  21 Baseplate Temperature 0° C to +50° C	<u>Mechanical</u>		*
18 Connectors SMA female  19 Grounding Chassis  20 Cooling Adequate Airflow Required  Environmental  21 Baseplate Temperature 0° C to +50° C	16	Dimensions	6" x 3" x 1.1"
19 Grounding Chassis 20 Cooling Adequate Airflow Required  Environmental 21 Baseplate Temperature 0° C to +50° C	17	Weight	4.20 Lbs.
20 Cooling Adequate Airflow Required  Environmental  21 Baseplate Temperature 0° C to +50° C	18	Connectors	SMA female
Environmental  21 Baseplate Temperature 0° C to +50° C	19	Grounding	Chassis
21 Baseplate Temperature 0° C to +50° C	20	Cooling	Adequate Airflow Required
	<u>Environmental</u>		
22 Operating Humidity 95% Non-condensing	21	Baseplate Temperature	0° C to +50° C
	22	Operating Humidity	95% Non-condensing
23 Operating Altitude Up to 10,000' Above Sea Level	23	Operating Altitude	Up to 10,000' Above Sea Level
24 Shock and Vibration Normal Truck Transport	24	Shock and Vibration	Normal Truck Transport

Specifications subject to change without notice

## **INCLUDED FEATURES**

♦ Mounted on a Heat Sink with fans

Approved By:	