

## MGA Series

## 40MHz – 850MHz 630mW RF Amplifier

### Features

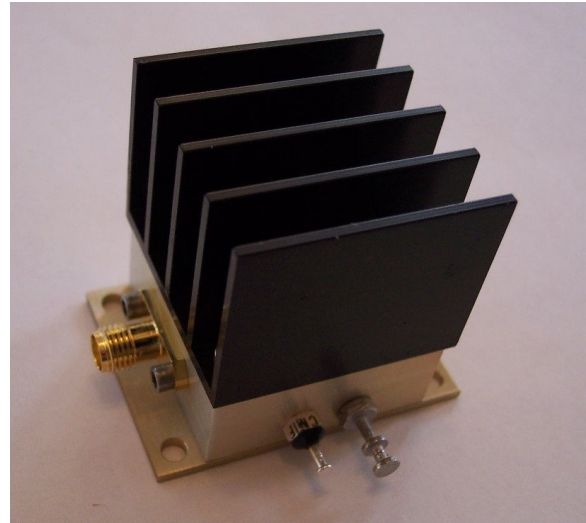
- Frequency Range: 40 - 850MHz
- Gain: 17dB
- P<sub>1dB</sub>: +28dBm
- IP3: +45dBm
- Noise Figure: 3dB
- Input VSWR: 1.5:1
- Output VSWR: 1.4:1
- DC Power: 9V/330mA
- SMA Connector

Performance Tested @ 400MHz

### Description

MGA-400 is a 630mW output wideband RF Amplifier operates with frequency range from 40MHz to 850MHz.

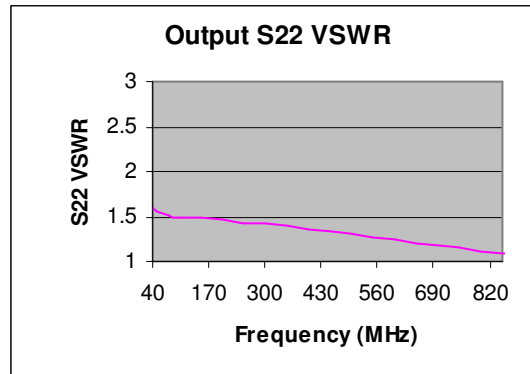
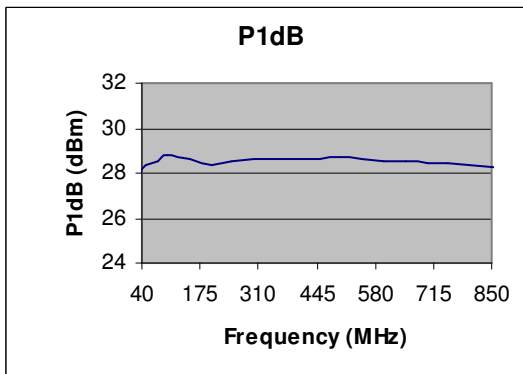
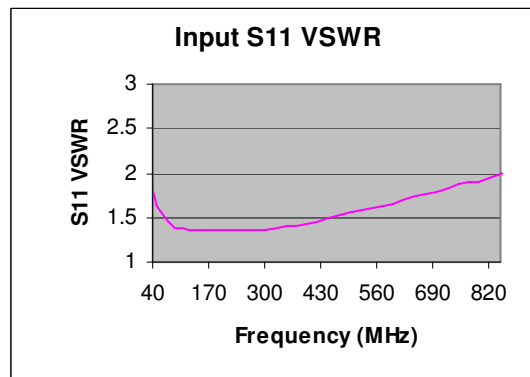
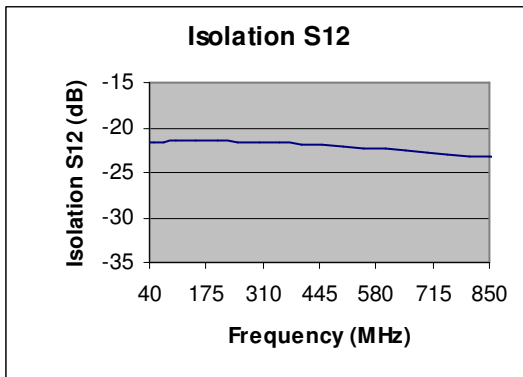
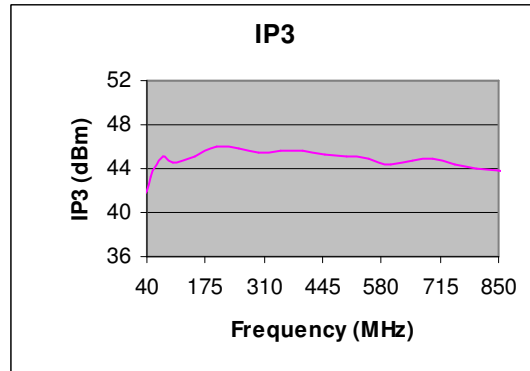
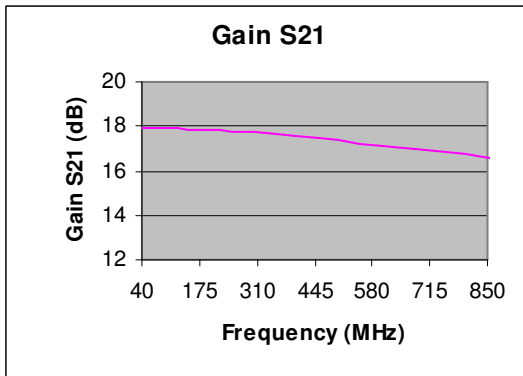
### Picture



### Electrical Specifications @ +25 °C, Z<sub>S</sub> = Z<sub>L</sub> = 50 Ω, V<sub>cc</sub>=+9V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	40		850
Gain f = 40MHz	dB		17.9	
f = 400MHz	dB		17.5	
f = 850MHz	dB		16.5	
P <sub>1dB</sub>	dBm		+28	
IP3 at 400MHz	dBm		+45	
Noise Figure at 400MHz	dB		3.0	
Reverse Isolation	dB	-20	-21	
VSWR f = 40-850MHz				
Input VSWR			2.0:1	
Output VSWR			2.0:1	
DC Power Supply	V		9	
Supply Current	mA		330	

### Typical Performance @ +25 °C



**MGA Series****40MHz – 850MHz 630mW RF Amplifier**

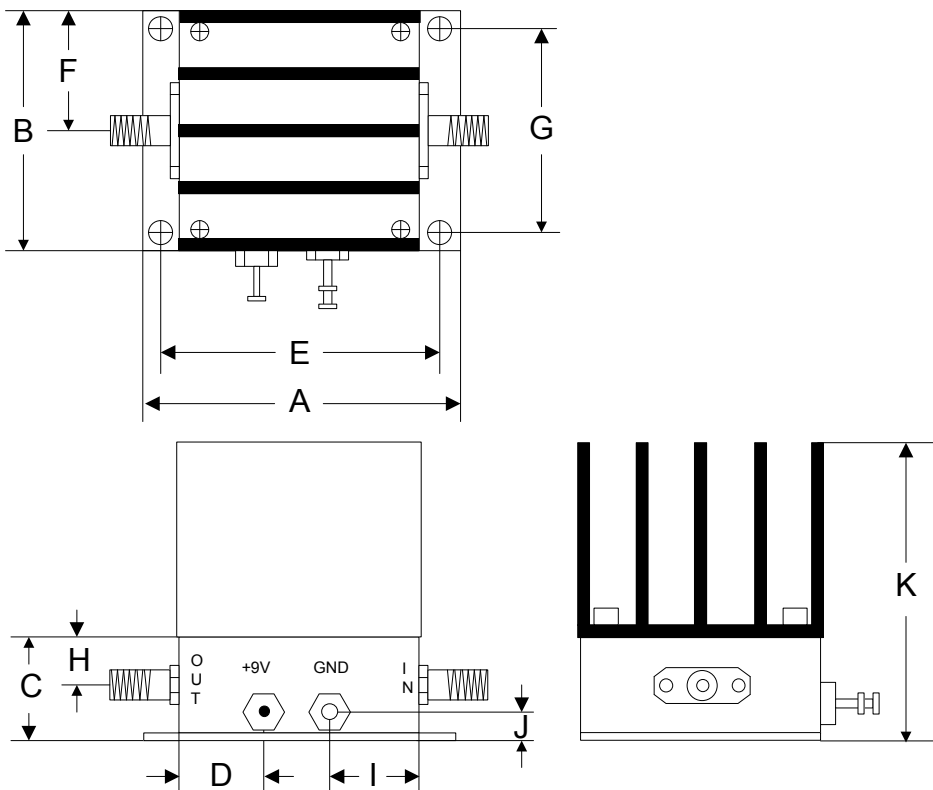
Test Data @ +25 °C

Frequency(MHz)	S21 (dB)	S12 (dB)	S11	S22	P <sub>1dB</sub> (dBm)	IP3 (dBm)
30	17.95	-21.94	2.13	1.65	+27.60	+41.50
40	17.95	-21.76	1.80	1.59	+28.19	+42.04
50	17.94	-21.71	1.63	1.55	+28.32	+43.20
75	17.94	-21.63	1.44	1.52	+28.53	+45.17
100	17.93	-21.51	1.39	1.50	+28.84	+44.50
150	17.87	-21.49	1.36	1.49	+28.61	+45.10
200	17.83	-21.54	1.35	1.46	+28.40	+46.03
250	17.76	-21.62	1.35	1.43	+28.55	+45.80
300	17.71	-21.64	1.37	1.42	+28.65	+45.50
350	17.67	-21.77	1.41	1.39	+28.60	+45.56
400	17.55	-21.85	1.42	1.36	+28.58	+45.65
450	17.46	-21.97	1.50	1.34	+28.62	+45.33
500	17.35	-22.12	1.56	1.30	+28.72	+45.17
550	17.22	-22.25	1.61	1.27	+28.63	+44.87
600	17.16	-22.38	1.66	1.24	+28.56	+44.32
650	17.05	-22.51	1.74	1.21	+28.51	+44.65
700	16.95	-22.70	1.79	1.17	+28.47	+44.92
750	16.83	-22.91	1.87	1.15	+28.41	+44.45
800	16.72	-23.15	1.91	1.12	+28.34	+44.02
850	16.59	-23.30	1.99	1.09	+28.28	+43.88
900	16.46	-23.48	2.05	1.08	+28.20	+43.42
950	16.40	-23.78	2.08	1.08	+28.16	+43.22
1000	16.15	-24.00	2.19	1.09	+28.11	+42.83

### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+16dBm
Supply Voltage	+13V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C

### Outline



	A	B	C	D	E	F	G	H	I	J	K
Inch	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187	1.563
mm	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76	39.70