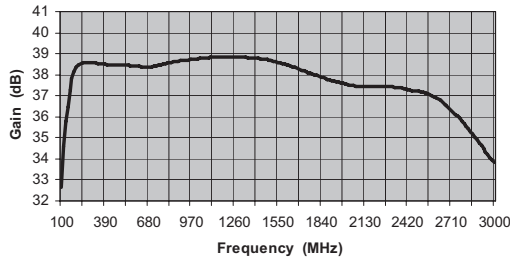


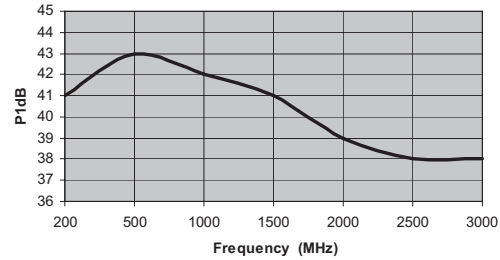
# MITEQ AM-1631 SERIES AMPLIFIER

FREQUENCY (MHz)	MODEL NUMBER	GAIN (dB) (Min.)	VAR. ( $\pm$ dB) (Max.)	VSWR (Max.)	IMPED. IN/OUT (Ohms)	NOISE FIGURE (dB, Typ.)	P1 dB (dBm) (Typ.)	VOLTS	NOM. DC POWER (mA)	OUTLINE NO.
200-1000	AM-1631-1000	37	0.5	2.0:1	50/50	3.6	27	15	320	15-2
200-2000	AM-1631-2000	37	1	2.0:1	50/50	3.8	27	15	320	15-2
200-2500	AM-1631-2500	36	1.5	2.0:1	50/50	4	27	15	320	15-2

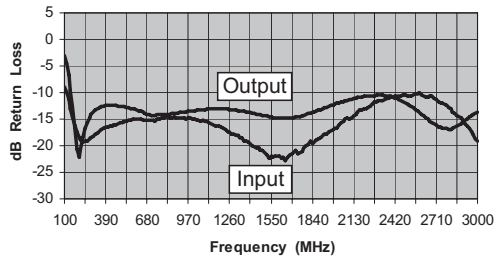
Gain (dB)



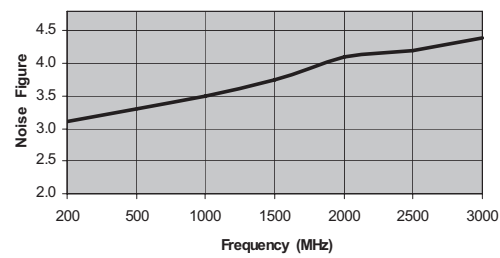
Output Third Order Intercept Point (+dBm)



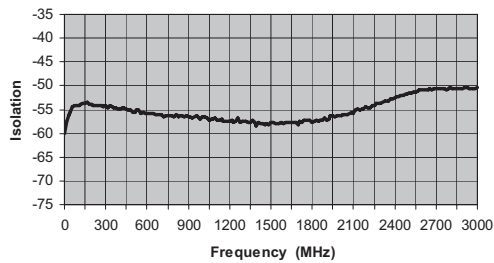
Input & Output Return Loss (dBRL)



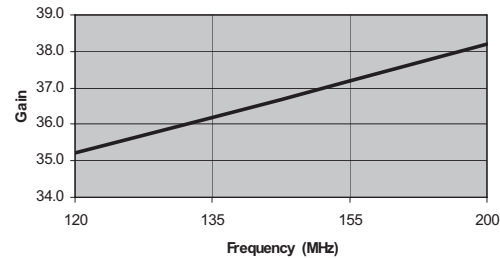
Noise Figure (dB)



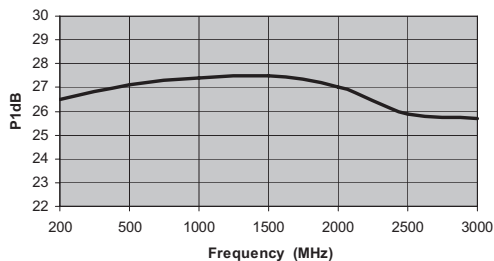
Reverse Isolation (dB)



Low Frequency Gain Rolloff (dB)



Output -1dB Gain Compression (+dBm)



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# MITEQ AM-1631 SERIES AMPLIFIER

Freq. (MHz)	Gain (dB)
100	32.6
115	34.6
129	35.7
144	36.5
158	37.3
173	37.8
187	38.1
202	38.3
216	38.5
231	38.5
245	38.6
260	38.6
274	38.6
289	38.6
303	38.6
318	38.6
332	38.6
347	38.5
361	38.5
376	38.5
390	38.5
405	38.5
419	38.5
434	38.5
448	38.5
463	38.5
477	38.5
492	38.5
506	38.4
521	38.4
535	38.4
550	38.4
564	38.4
579	38.4
593	38.4
608	38.4
622	38.4
637	38.4
651	38.3
666	38.3
680	38.3
695	38.4
709	38.4
724	38.4
738	38.4
753	38.5
767	38.5
782	38.5
796	38.5
811	38.6
825	38.6
840	38.6
854	38.6
869	38.6
883	38.6
898	38.7

Freq. (MHz)	Gain (dB)
912	38.7
927	38.7
941	38.7
956	38.7
970	38.7
985	38.7
999	38.7
1014	38.8
1028	38.8
1043	38.8
1057	38.8
1072	38.8
1086	38.8
1101	38.8
1115	38.8
1130	38.8
1144	38.8
1159	38.8
1173	38.8
1188	38.8
1202	38.8
1217	38.8
1231	38.8
1246	38.8
1260	38.8
1275	38.8
1289	38.8
1304	38.8
1318	38.8
1333	38.8
1347	38.8
1362	38.8
1376	38.8
1391	38.8
1405	38.8
1420	38.8
1434	38.8
1449	38.7
1463	38.7
1478	38.7
1492	38.7
1507	38.7
1521	38.6
1536	38.6
1550	38.6
1565	38.6
1579	38.5
1594	38.5
1608	38.5
1623	38.5
1637	38.4
1652	38.4
1666	38.3
1681	38.3
1695	38.3
1710	38.2

Freq. (MHz)	Gain (dB)
1724	38.2
1739	38.1
1753	38.1
1768	38.1
1782	38.0
1797	38.0
1811	38.0
1826	37.9
1840	37.9
1855	37.9
1869	37.8
1884	37.8
1898	37.8
1913	37.7
1927	37.7
1942	37.7
1956	37.6
1971	37.6
1985	37.6
2000	37.6
2014	37.5
2029	37.5
2043	37.5
2058	37.5
2072	37.5
2087	37.5
2101	37.5
2116	37.5
2130	37.4
2145	37.4
2159	37.4
2174	37.4
2188	37.4
2203	37.4
2217	37.4
2232	37.4
2246	37.4
2261	37.4
2275	37.4
2290	37.4
2304	37.4
2319	37.4
2333	37.4
2348	37.4
2362	37.4
2377	37.4
2391	37.3
2406	37.3
2420	37.3
2435	37.3
2449	37.2
2464	37.2
2478	37.2
2493	37.2
2507	37.2
2522	37.2

Freq. (MHz)	Gain (dB)
2536	37.1
2551	37.1
2565	37.0
2580	37.0
2594	36.9
2609	36.9
2623	36.8
2638	36.8
2652	36.7
2667	36.6
2681	36.5
2696	36.4
2710	36.3
2725	36.2
2739	36.1
2754	36.0
2768	35.9
2783	35.8
2797	35.7
2812	35.5
2826	35.4
2841	35.3
2855	35.2
2870	35.0
2884	34.9
2899	34.8
2913	34.6
2928	34.5
2942	34.3
2957	34.2
2971	34.1
2986	33.9
3000	33.8



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# MITEQ AM-1631 SERIES AMPLIFIER

Freq (MHz)	Input VSWR (dBRL)	Input VSWR (dBRL)
100	-9	-3
115	-10	-5
129	-11	-7
144	-13	-9
158	-14	-13
173	-16	-17
187	-17	-21
202	-18	-22
216	-19	-21
231	-19	-18
245	-19	-17
260	-19	-16
274	-19	-15
289	-18	-14
303	-18	-14
318	-18	-13
332	-18	-13
347	-17	-13
361	-17	-13
376	-17	-13
390	-17	-12
405	-16	-12
419	-16	-12
434	-16	-12
448	-16	-12
463	-16	-12
477	-16	-13
492	-16	-13
506	-16	-13
521	-15	-13
535	-15	-13
550	-15	-13
564	-15	-13
579	-15	-13
593	-15	-13
608	-15	-13
622	-15	-13
637	-15	-14
651	-15	-14
666	-15	-14
680	-15	-14
695	-15	-14
709	-15	-14
724	-15	-14
738	-15	-14
753	-15	-14
767	-15	-14
782	-15	-14
796	-15	-14
811	-15	-14
825	-15	-14
840	-15	-14
854	-15	-14
869	-15	-14
883	-15	-14
898	-15	-14
912	-15	-14
927	-15	-14
941	-15	-14
956	-15	-14

Freq (MHz)	Input VSWR (dBRL)	Input VSWR (dBRL)
970	-15	-14
985	-15	-14
999	-15	-13
1014	-15	-13
1028	-15	-13
1043	-15	-13
1057	-15	-13
1072	-15	-13
1086	-15	-13
1101	-15	-13
1115	-16	-13
1130	-16	-13
1144	-16	-13
1159	-16	-13
1173	-16	-13
1188	-16	-13
1202	-16	-13
1217	-17	-13
1231	-17	-13
1246	-17	-13
1260	-17	-13
1275	-18	-13
1289	-18	-13
1304	-18	-13
1318	-18	-13
1333	-18	-13
1347	-19	-13
1362	-19	-14
1376	-19	-14
1391	-19	-14
1405	-20	-14
1420	-20	-14
1434	-20	-14
1449	-20	-14
1463	-20	-14
1478	-21	-14
1492	-21	-14
1507	-21	-14
1521	-22	-14
1536	-22	-15
1550	-22	-15
1565	-22	-15
1579	-22	-15
1594	-22	-15
1608	-22	-15
1623	-22	-15
1637	-22	-15
1652	-23	-15
1666	-22	-15
1681	-22	-15
1695	-21	-15
1710	-21	-15
1724	-21	-15
1739	-22	-15
1753	-21	-14
1768	-21	-14
1782	-21	-14
1797	-20	-14
1811	-20	-14
1826	-19	-14
1840	-20	-14
1855	-19	-14

Freq (MHz)	Input VSWR (dBRL)	Input VSWR (dBRL)
1869	-19	-13
1884	-19	-13
1898	-18	-13
1913	-18	-13
1927	-18	-13
1942	-18	-13
1956	-17	-13
1971	-17	-12
1985	-17	-12
2000	-17	-12
2014	-17	-12
2029	-16	-12
2043	-16	-12
2058	-15	-12
2072	-15	-12
2087	-15	-11
2101	-15	-11
2116	-15	-11
2130	-14	-11
2145	-14	-11
2159	-14	-11
2174	-13	-11
2188	-13	-11
2203	-13	-11
2217	-13	-11
2232	-13	-11
2246	-13	-11
2261	-12	-11
2275	-12	-11
2290	-12	-11
2304	-12	-11
2319	-11	-11
2333	-12	-11
2348	-11	-11
2362	-11	-11
2377	-11	-11
2391	-11	-11
2406	-11	-11
2420	-11	-11
2435	-11	-11
2449	-11	-11
2464	-11	-11
2478	-11	-12
2493	-10	-12
2507	-11	-12
2522	-11	-12
2536	-11	-13
2551	-11	-13
2565	-10	-13
2580	-10	-13
2594	-10	-14
2609	-10	-14
2623	-11	-14
2638	-11	-15
2652	-11	-15
2667	-11	-15
2681	-11	-16
2696	-11	-16
2710	-11	-16
2725	-12	-16
2739	-12	-17
2754	-12	-17

Freq (MHz)	Input VSWR (dBRL)	Input VSWR (dBRL)
2768	-12	-17
2783	-12	-17
2797	-13	-17
2812	-13	-17
2826	-14	-17
2841	-14	-17
2855	-14	-16
2870	-14	-16
2884	-15	-16
2899	-15	-16
2913	-16	-15
2928	-16	-15
2942	-17	-15
2957	-17	-14
2971	-18	-14
2986	-19	-14
3000	-19	-14



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# MITEQ AM-1631 SERIES AMPLIFIER

Freq. (MHz)	Reverse Isolation (dB)
100	-60
115	-58
129	-56
144	-55
158	-55
173	-54
187	-54
202	-54
216	-54
231	-54
245	-54
260	-53
274	-54
289	-54
303	-54
318	-54
332	-54
347	-54
361	-54
376	-54
390	-54
405	-55
419	-54
434	-54
448	-55
463	-55
477	-55
492	-55
506	-55
521	-55
535	-55
550	-55
564	-55
579	-56
593	-56
608	-55
622	-55
637	-56
651	-56
666	-56
680	-56
695	-56
709	-56
724	-56
738	-56
753	-56
767	-56
782	-56
796	-57
811	-56
825	-56
840	-56
854	-56
869	-56

Freq. (MHz)	Reverse Isolation (dB)
883	-56
898	-56
912	-56
927	-56
941	-57
956	-56
970	-57
985	-57
999	-57
1014	-57
1028	-56
1043	-57
1057	-57
1072	-57
1086	-57
1101	-57
1115	-57
1130	-57
1144	-57
1159	-57
1173	-57
1188	-57
1202	-57
1217	-58
1231	-57
1246	-58
1260	-57
1275	-57
1289	-58
1304	-57
1318	-57
1333	-58
1347	-58
1362	-58
1376	-58
1391	-58
1405	-58
1420	-57
1434	-58
1449	-58
1463	-58
1478	-58
1492	-58
1507	-58
1521	-58
1536	-58
1550	-58
1565	-58
1579	-58
1594	-58
1608	-58
1623	-58
1637	-58
1652	-58
1666	-58

Freq. (MHz)	Reverse Isolation (dB)
1681	-58
1695	-58
1710	-58
1724	-58
1739	-58
1753	-57
1768	-58
1782	-57
1797	-57
1811	-57
1826	-57
1840	-58
1855	-57
1869	-57
1884	-57
1898	-57
1913	-57
1927	-57
1942	-57
1956	-57
1971	-56
1985	-56
2000	-56
2014	-56
2029	-56
2043	-56
2058	-56
2072	-56
2087	-56
2101	-56
2116	-56
2130	-56
2145	-55
2159	-55
2174	-55
2188	-55
2203	-55
2217	-54
2232	-55
2246	-55
2261	-54
2275	-54
2290	-54
2304	-54
2319	-54
2333	-53
2348	-53
2362	-53
2377	-53
2391	-53
2406	-53
2420	-53
2435	-52
2449	-52
2464	-52

Freq. (MHz)	Reverse Isolation (dB)
2478	-52
2493	-52
2507	-52
2522	-52
2536	-52
2551	-51
2565	-51
2580	-51
2594	-51
2609	-51
2623	-51
2638	-51
2652	-51
2667	-51
2681	-51
2696	-51
2710	-51
2725	-51
2739	-51
2754	-51
2768	-51
2783	-51
2797	-51
2812	-50
2826	-51
2841	-51
2855	-51
2870	-51
2884	-51
2899	-51
2913	-50
2928	-50
2942	-51
2957	-51
2971	-51
2986	-51
3000	-50



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## MITEQ AM-1631 SERIES AMPLIFIER

Frequency (MHz)	P1dB (dBm)	3 <sup>rd</sup> Order Intercept (dBm)	Noise Figure (dB)
200	+26.5	+41	3.10
500	+27.1	+43	3.30
1000	+27.4	+42	3.50
1500	+27.5	+41	3.75
2000	+27.0	+39	4.10
2500	+25.9	+38	4.20
3000	+25.7	+38	4.40



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## OPTIONS FOR BIPOLAR AMPLIFIERS

### INPUT BIAS TEE

#### Add Suffix “-F”

Used to inject bias signal to photo diode or other type of device. Check for availability on your model before ordering. Available on most units operating above 1 MHz. Please contact MITEQ with your custom requirements.

### BIAS THROUGH THE OUTPUT CONNECTOR

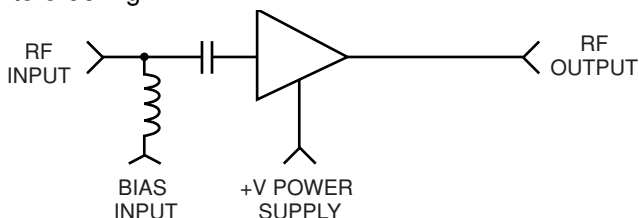
#### Add Suffix “-1306/E” or “-1306/D”

Used to supply operating power when the amplifier is remotely located while eliminating the need to run a separate DC line. Specify whether existing power pin should be “Enabled” or “Disabled.” To order, add -1306/E or -1306/D after model number. Example: AU-2A-0150-1306/E will have existing +15 V pin enabled so that it can be used as a test point. Use caution with this option since any voltage applied here will also be present on the RF output center pin. Available on most units operating above 1 MHz.

### BIAS THROUGH THE OUTPUT CONNECTOR WITH DC FEEDTHROUGH TO RF INPUT

#### Add Suffix “-1334/E” or “-1334/D”

Used to supply operating power when the amplifier is remotely located and eliminates the need to run a separate DC line. This DC voltage is then internally fed to the RF input to power a remote LNA or other low power equipment. Maximum current of external load will vary with model type. Available on most units operating above 1 MHz. Please contact factory prior to ordering.



Specify whether existing power pin should be “Enabled” or “Disabled”. To order, add “-1334/E” or “-1334/D”

after model number. Example: AU-2A-0150-1334/E will have existing +15 V pin enabled so that it can be used as a test point. Use caution with this option since any voltage applied here will also be present on both the RF output and input center pins.

### TYPE N OR BNC CONNECTORS

#### Add Suffix “-N” or “-BNC”

Type N-female and type BNC-female are available for all outlines 1 through 5, 12, 13 and 15 amplifiers. Add connector type after model number. Examples: AU-2A-0150-N; AU-2A-0150-BNC. Type N-male and mixed connector types are also available on request. Please call MITEQ with your specific requirements.

### INPUT INTERNAL LIMITER

#### Add Suffix “-1103”

Available on models up to 500 MHz. Will protect the input stage from CW signals as high as +30 dBm. To order, add “-1103” after model number. Example: AU-2A-0150-1103. Options are available for protection against short duration pulses up to 50 W.

### AC POWER SUPPLY (100 to 240 VAC, 47 - 440 Hz). Add Suffix “-1179”

Available as an add-on to most models using outlines 1 through 5 and 15. Includes 6-foot line cord with standard US line plug, internal fuse, on/off switch and LED indicator light. Amplifier is permanently mounted to power supply. To order, add “-1179” after model number. Example: AU-2A-0150-1179. Refer to outline 12 for dimensions.

### AC POWER SUPPLY (Wall plug-in unit) Part Number “205531-19”

A low cost alternate to option “-1179”, the wall plug-in unit is a small switching power supply capable of delivering 1 amp at 15 volts.

### AC POWER SUPPLY WITH SMC CONNECTORS (Wall plug-in unit) Part Number “-1179SC”

Same as above except has mating SMC connectors on amplifier DC input and power supply DC output. Available for outlines 1 through 10, 13 and 15.

### ADDITIONAL OPTIONS AVAILABLE

OPTION	SUFFIX
Gain Window	-GW
Phase Match	-PM
Amplitude Match	-AM
Gain Control	-GC

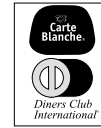


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## GENERAL INFORMATION

### PRICING AND TERMS

A quotation on any item in the catalog is available by contacting the factory. All quotations, unless otherwise noted, are valid for 60 days from the date of issue, F.O.B. (FCA) Hauppauge, NY 11788. Pricing does not include customer or government source inspection unless otherwise noted. On international orders, an irrevocable letter of credit may be required. MITEQ accepts these credit cards:



### QUANTITY DISCOUNTS

A quantity discount is generally available on most catalog items. Due to the wide variety of devices in the catalog, it is not possible to provide a standard discount schedule. When quantities are involved, please contact the factory and the appropriate information will be provided.

### SOURCE INSPECTION

Government / customer source inspection is available on any item upon receipt of the complete written confirmation of purchase order items, including the prime government contract number. Source inspection with respect to some products increases the unit price and extends delivery because of duplicate standard final inspection and testing. It is recommended wherever possible that a Certificate of Compliance be substituted for source inspection to minimize price and delivery delays.

### SHIPPING INFORMATION

Unless instructed otherwise by the customer, we will ship UPS in the U.S. F.O.B. (FCA) Hauppauge. Air freight will be used as the primary international means of shipment. Please indicate at time of purchase what method of shipment you require.

### RETURNED MATERIAL

When returning material for repair or replacement, please ensure that there is complete information included with the shipment, giving a detailed description of the reason for its return, the date and purchase order on which it was obtained, and the exact address to which the material is to be reshipped. All returns must arrive freight, postage, duties and handling prepaid.

### REPAIR COSTS

Warranty repairs will be made at no cost to the customer. Units out of warranty, or those which have been mishandled, will require approval by the customer for the charges involved before the repairs can be accomplished. We will provide an estimate for the cost of the repair, which can be applied to the repair, if approval is granted. For those items that are deemed beyond repair, or where the customer may decide not to repair the unit, an evaluation fee and handling charge will be applicable.

### APPLICATION ENGINEERING

We maintain a large support staff of engineers who are experts in specific areas of microwave technology. Each has an engineering background that combines both a formal engineering education with training and experience in product design. As further technical support, we make available the services of our engineering and scientific staff, who may be consulted on more advanced circuit designs or application problems.

### DRAWINGS AND SPECIFICATIONS

The material presented in this catalog was current at the time of publication. MITEQ Inc.'s continuing product improvement program makes it necessary to reserve the right to change our mechanical and electrical specifications without notice. If either of these parameters is critical, please contact the factory to verify that the information is current.

## ADDITIONAL INFORMATION

### WARRANTY

### ISO 9001:2000 Certified



### MITEQ FEDERAL SUPPLY CODE

Our Federal Supply Code is: 33592



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