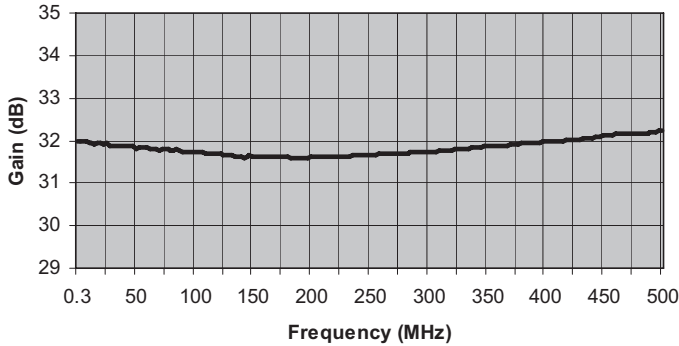


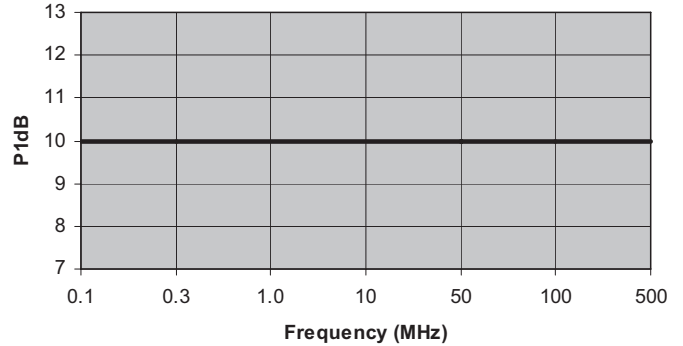
# MITEQ AU-1310 – AU-1534 AMPLIFIERS

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.
0.01–500	AU-1310	30	0.5	2.0:1	50/50	1.4	9	15	50	2
0.001–500	AU-1534	30	0.5	2.0:1	50/50	1.4	9	15	50	2

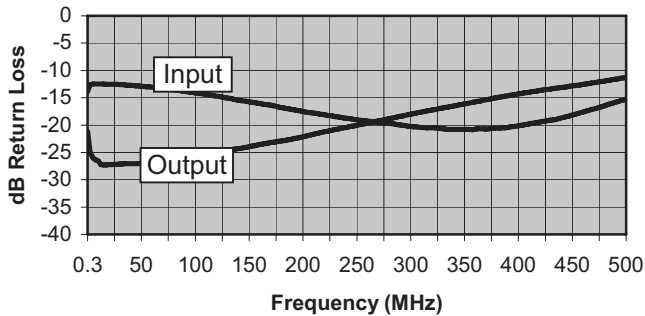
Gain (dB)



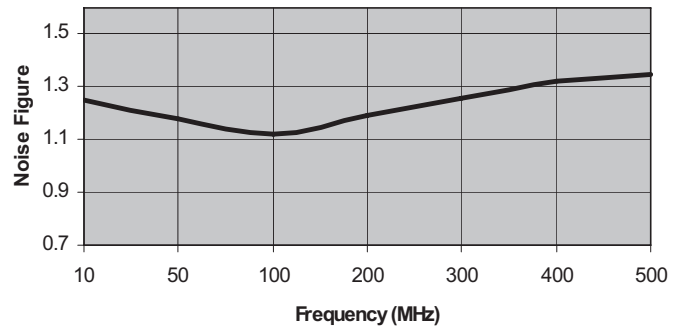
Output -1dB Gain Compression (+dBm)



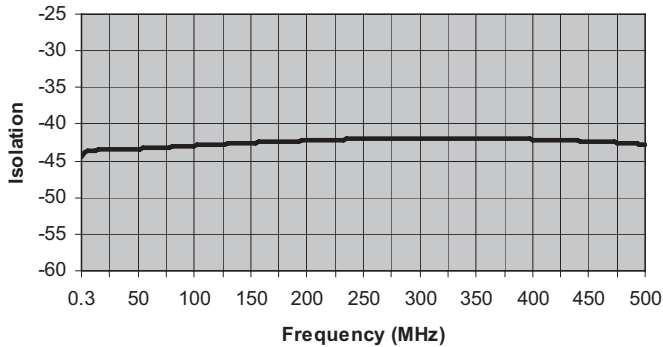
Input & Output Return Loss (dBRL)



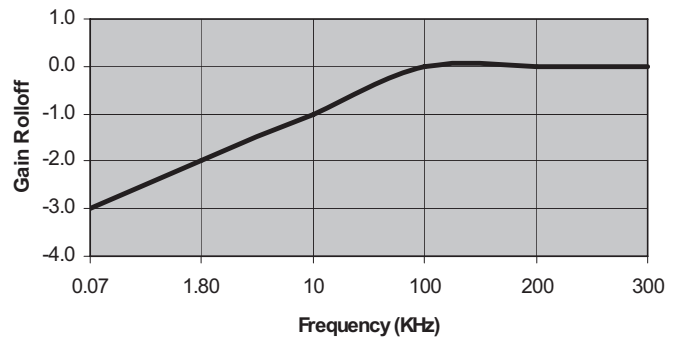
Noise Figure (dB)



Reverse Isolation (dB)



Low Frequency Gain Rolloff (dB)



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## MITEQ AU-1310 – AU-1534 AMPLIFIERS

Freq (MHz)	Gain (dB)
0.3	32.0
3	32.0
5	32.0
8	32.0
10	31.9
13	31.9
15	31.9
18	31.9
20	31.9
23	31.9
25	31.9
28	31.9
30	31.9
33	31.9
35	31.9
38	31.9
40	31.9
43	31.9
45	31.9
48	31.9
50	31.8
53	31.8
55	31.8
58	31.9
60	31.8
63	31.8
65	31.8
68	31.8
70	31.8
73	31.8
75	31.8
78	31.8
80	31.8
83	31.8
85	31.8
88	31.8
90	31.7
93	31.7
95	31.7
98	31.7
100	31.7
103	31.7
105	31.7
108	31.7
110	31.7
113	31.7
115	31.7
118	31.7
120	31.7
123	31.7
125	31.7
128	31.6
130	31.6
133	31.6
135	31.6
138	31.6
140	31.6

Freq (MHz)	Gain (dB)
143	31.6
145	31.6
148	31.6
150	31.6
153	31.6
155	31.6
158	31.6
160	31.6
163	31.6
165	31.6
168	31.6
170	31.6
173	31.6
175	31.6
178	31.6
180	31.6
183	31.6
185	31.6
188	31.6
190	31.6
193	31.6
195	31.6
198	31.6
200	31.6
203	31.6
205	31.6
208	31.6
210	31.6
213	31.6
215	31.6
218	31.6
220	31.6
223	31.6
225	31.6
228	31.6
230	31.6
233	31.6
235	31.6
238	31.7
240	31.7
243	31.7
245	31.7
248	31.6
250	31.6
253	31.7
255	31.7
258	31.7
260	31.7
263	31.7
265	31.7
268	31.7
270	31.7
273	31.7
275	31.7
278	31.7
280	31.7
283	31.7

Freq (MHz)	Gain (dB)
285	31.7
288	31.7
290	31.7
293	31.7
295	31.7
298	31.7
300	31.7
303	31.7
305	31.7
308	31.7
310	31.8
313	31.8
315	31.8
318	31.8
320	31.8
323	31.8
325	31.8
328	31.8
330	31.8
333	31.8
335	31.8
338	31.8
340	31.8
343	31.8
345	31.9
348	31.9
350	31.9
353	31.9
355	31.9
358	31.9
360	31.9
363	31.9
365	31.9
368	31.9
370	31.9
373	31.9
375	31.9
378	31.9
380	31.9
383	31.9
385	31.9
388	31.9
390	32.0
393	32.0
395	32.0
398	32.0
400	32.0
403	32.0
405	32.0
408	32.0
410	32.0
413	32.0
415	32.0
418	32.0
420	32.0
423	32.0
425	32.0

Freq (MHz)	Gain (dB)
428	32.0
430	32.0
433	32.0
435	32.1
438	32.1
440	32.1
443	32.1
445	32.1
448	32.1
450	32.1
453	32.1
455	32.1
458	32.1
460	32.1
463	32.2
465	32.2
468	32.2
470	32.2
473	32.2
475	32.2
478	32.2
480	32.2
483	32.2
485	32.2
488	32.2
490	32.2
493	32.2
495	32.2
498	32.2
500	32.2



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## MITEQ AU-1310 – AU-1534 AMPLIFIERS

Freq. (MHz)	Input VSWR (dBRL)	Output VSWR (dBRL)
0.3	-14	-21
3	-13	-25
5	-13	-26
8	-12	-26
10	-12	-27
13	-13	-27
15	-12	-27
18	-13	-27
20	-13	-27
23	-13	-27
25	-13	-27
28	-13	-27
30	-13	-27
33	-13	-27
35	-13	-27
38	-13	-27
40	-13	-27
43	-13	-27
45	-13	-27
48	-13	-27
50	-13	-27
53	-13	-27
55	-13	-27
58	-13	-27
60	-13	-27
63	-13	-27
65	-13	-27
68	-13	-27
70	-13	-27
73	-13	-27
75	-13	-27
78	-13	-27
80	-14	-26
83	-14	-26
85	-14	-26
88	-14	-26
90	-14	-26
93	-14	-26
95	-14	-26
98	-14	-26
100	-14	-26
103	-14	-26
105	-14	-26
108	-14	-26
110	-14	-25
113	-14	-25
115	-15	-25
118	-15	-25
120	-15	-25
123	-15	-25
125	-15	-25
128	-15	-25
130	-15	-25
133	-15	-25
135	-15	-24
138	-15	-24

Freq. (MHz)	Input VSWR (dBRL)	Output VSWR (dBRL)
140	-15	-24
143	-16	-24
145	-16	-24
148	-16	-24
150	-16	-24
153	-16	-24
155	-16	-24
158	-16	-24
160	-16	-24
163	-16	-23
165	-16	-23
168	-16	-23
170	-16	-23
173	-16	-23
175	-17	-23
178	-17	-23
180	-17	-23
183	-17	-23
185	-17	-23
188	-17	-23
190	-17	-23
193	-17	-22
195	-17	-22
198	-17	-22
200	-18	-22
203	-18	-22
205	-18	-22
208	-18	-22
210	-18	-22
213	-18	-22
215	-18	-21
218	-18	-21
220	-18	-21
223	-18	-21
225	-18	-21
228	-18	-21
230	-18	-21
233	-19	-21
235	-19	-21
238	-19	-21
240	-19	-20
243	-19	-20
245	-19	-20
248	-19	-20
250	-19	-20
253	-19	-20
255	-19	-20
258	-19	-20
260	-19	-20
263	-19	-20
265	-19	-19
268	-19	-19
270	-20	-19
273	-20	-19
275	-20	-19
278	-20	-19

Freq. (MHz)	Input VSWR (dBRL)	Output VSWR (dBRL)
280	-20	-19
283	-20	-19
285	-20	-19
288	-20	-19
290	-20	-18
293	-20	-18
295	-20	-18
298	-20	-18
300	-20	-18
303	-20	-18
305	-20	-18
308	-20	-18
310	-20	-18
313	-20	-18
315	-20	-17
318	-20	-17
320	-20	-17
323	-21	-17
325	-21	-17
328	-21	-17
330	-21	-17
333	-21	-17
335	-21	-17
338	-21	-17
340	-21	-16
343	-21	-16
345	-21	-16
348	-21	-16
350	-21	-16
353	-21	-16
355	-21	-16
358	-21	-16
360	-21	-16
363	-21	-16
365	-21	-16
368	-21	-15
370	-21	-15
373	-21	-15
375	-21	-15
378	-21	-15
380	-21	-15
383	-21	-15
385	-21	-15
388	-20	-15
390	-20	-15
393	-20	-15
395	-20	-14
398	-20	-14
400	-20	-14
403	-20	-14
405	-20	-14
408	-20	-14
410	-20	-14
413	-20	-14
415	-20	-14
418	-20	-14

Freq. (MHz)	Input VSWR (dBRL)	Output VSWR (dBRL)
420	-19	-14
423	-19	-14
425	-19	-14
428	-19	-13
430	-19	-13
433	-19	-13
435	-19	-13
438	-19	-13
440	-19	-13
443	-19	-13
445	-18	-13
448	-18	-13
450	-18	-13
453	-18	-13
455	-18	-13
458	-18	-13
460	-18	-13
463	-17	-12
465	-17	-12
468	-17	-12
470	-17	-12
473	-17	-12
475	-17	-12
478	-17	-12
480	-16	-12
483	-16	-12
485	-16	-12
488	-16	-12
490	-16	-12
493	-16	-12
495	-16	-11
498	-15	-11
500	-15	-11



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# MITEQ AU-1310 – AU-1534 AMPLIFIERS

Freq. (MHz)	Reverse Isolation (dB)
0.3	-44
3	-44
5	-44
8	-44
10	-44
13	-44
15	-44
18	-44
20	-44
23	-44
25	-43
28	-43
30	-43
33	-43
35	-43
38	-43
40	-43
43	-43
45	-43
48	-43
50	-43
53	-43
55	-43
58	-43
60	-43
63	-43
65	-43
68	-43
70	-43
73	-43
75	-43
78	-43
80	-43
83	-43
85	-43
88	-43
90	-43
93	-43
95	-43
98	-43
100	-43
103	-43
105	-43
108	-43
110	-43
113	-43
115	-43
118	-43
120	-43
123	-43
125	-43
128	-43
130	-43
133	-43
135	-43
138	-43

Freq. (MHz)	Reverse Isolation (dB)
140	-43
143	-43
145	-43
148	-43
150	-43
153	-43
155	-43
158	-42
160	-42
163	-42
165	-42
168	-42
170	-42
173	-42
175	-42
178	-42
180	-42
183	-42
185	-42
188	-42
190	-42
193	-42
195	-42
198	-42
200	-42
203	-42
205	-42
208	-42
210	-42
213	-42
215	-42
218	-42
220	-42
223	-42
225	-42
228	-42
230	-42
233	-42
235	-42
238	-42
240	-42
243	-42
245	-42
248	-42
250	-42
253	-42
255	-42
258	-42
260	-42
263	-42
265	-42
268	-42
270	-42
273	-42
275	-42
278	-42

Freq. (MHz)	Reverse Isolation (dB)
280	-42
283	-42
285	-42
288	-42
290	-42
293	-42
295	-42
298	-42
300	-42
303	-42
305	-42
308	-42
310	-42
313	-42
315	-42
318	-42
320	-42
323	-42
325	-42
328	-42
330	-42
333	-42
335	-42
338	-42
340	-42
343	-42
345	-42
348	-42
350	-42
353	-42
355	-42
358	-42
360	-42
363	-42
365	-42
368	-42
370	-42
373	-42
375	-42
378	-42
380	-42
383	-42
385	-42
388	-42
390	-42
393	-42
395	-42
398	-42
400	-42
403	-42
405	-42
408	-42
410	-42
413	-42
415	-42
418	-42

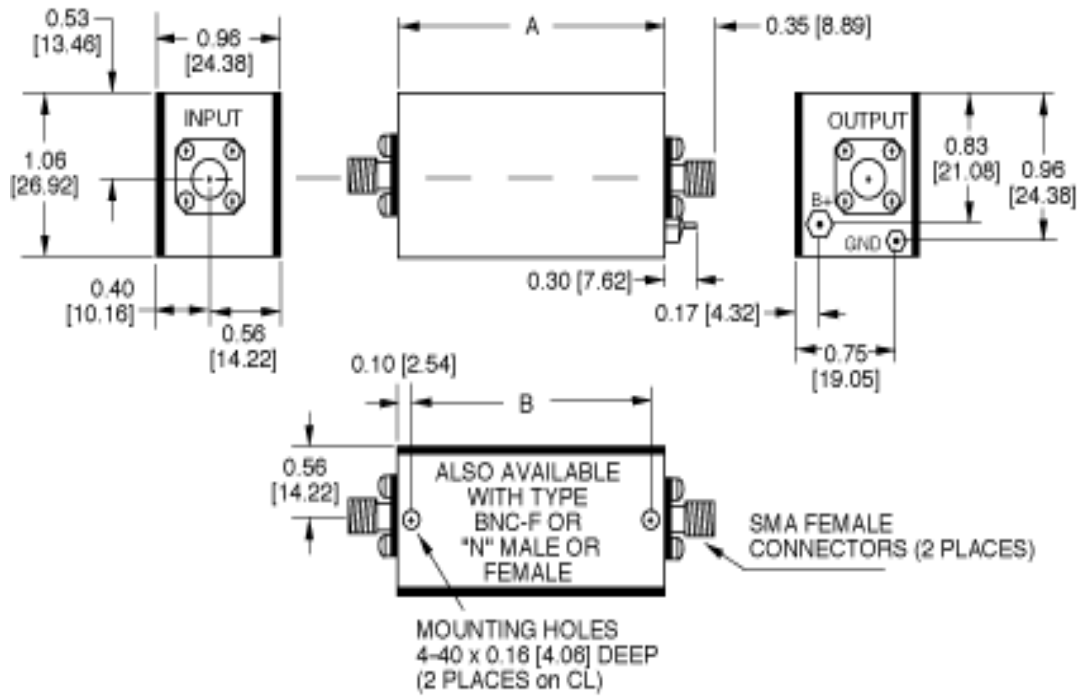
Freq. (MHz)	Reverse Isolation (dB)
420	-42
423	-42
425	-42
428	-42
430	-42
433	-42
435	-42
438	-42
440	-42
443	-42
445	-42
448	-42
450	-42
453	-42
455	-42
458	-42
460	-42
463	-42
465	-42
468	-42
470	-42
473	-42
475	-43
478	-43
480	-43
483	-43
485	-43
488	-43
490	-43
493	-43
495	-43
498	-43
500	-43



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# MITEQ AU-1310 - AU-1534 AMPLIFIERS

OUTLINE	DIM A	DIM B	OUNCES
2	1.92 [48.77]	1.72 [43.69]	2.2



NOTE: DIMENSIONS ARE IN INCHES [MILLIMETERS].



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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

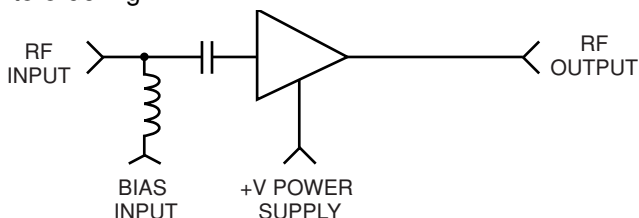
#### Add Suffix “-1306/E” or “-1306/D”

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

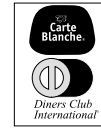


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## GENERAL INFORMATION

### 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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