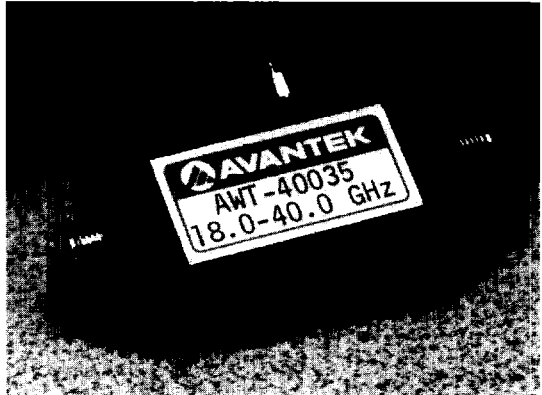

Features

- High Performance, Wide Band
- 18 through 40 GHz
- Low Noise Figure
- Wide Dynamic Range

AMT/AWT Series 18 to 40 GHz



Description

The AMT/AWT series provides premium performance over octave (AMT) and multi-octave (AWT) bands at 25°C. Temperature compensated amplifiers are specified over full military temperature ranges up to +71°C.

AMT/AWT series amplifiers are ideal for specification in performance driven applications in commercial and military systems. These amplifiers have a wide range of gain options, typically up to 45-50 dB, and are optimized for noise figure and dynamic range, consistent with the best technology available. A complete range of performance specifications is standard

on these series and specifications are guaranteed over the specified temperature range.

The IK series packaging is a hermetically-sealed machined aluminum housing. Options are available for waveguide WR42, WR28, and WR22 as well as field-replaceable 3mm coaxial connectors. These options are available for either the input or output RF port and can be ordered in combinations, e.g. waveguide input and coax output. Case length varies depending on the amount of gain or number of functions needed.

AMT Series—High Performance Connectorized Amplifiers

Guaranteed Specifications @ 25°C Case Temperature

Model	Frequency Response (GHz)	Gain (dB)	Gain (dB)	Noise Figure (dB)	Power Output for 1 dB Gain Compression (dBm)	Gain Flatness (±dB)	Typical Third Order Intercept Point (dBm)	VSWR (50 ohms)		Input Power		Case Type
	Minimum	Minimum	Maximum	Maximum	Minimum	Maximum		Maximum In	Maximum Out	Voltage (VDC)	Current (mA) Maximum	
AMT-21034	20.2-21.2	30	36	3.25	+12	1.00	+19	1.5	1.5	+12	325	IK4
AMT-26132	18-26.5	11	16	7.0	+10	1.00	+19	2.2	2.2	+12	160	IK2
AMT-26133	18-26.5	17	22	6.0	+12	1.25	+19	2.2	2.2	+12	200	IK4
AMT-26134	18-26.5	23	28	6.0	+12	1.50	+19	2.2	2.2	+12	280	IK4
AMT-26135	18-26.5	25	31	7.0	+21	2.50	+28	2.2	2.2	+12	1050	IK4
AMT-26136	18-26.5	30	36	7.0	+21	2.50	+28	2.2	2.2	+12	1100	IK6
AMT-26137	18-26.5	37	45	7.0	+21	3.00	+28	2.2	2.2	+12	1150	IK6
AMT-26175	18-26.5	25	31	5.5	+12	2.50	+19	2.2	2.2	+12	380	IK4
AMT-26176	18-26.5	30	36	5.5	+12	2.50	+19	2.2	2.2	+12	460	IK6
AMT-26177	18-26.5	37	45	5.5	+12	3.00	+19	2.2	2.2	+12	540	IK6

AMT Series —Temperature Compensated Connectorized Amplifiers

Guaranteed Specifications @ -54° to +71°C Case Temperature

AMT-21044	20.2-21.2	30	36	3.5	+10	1.5	+17	1.5	1.5	+12	375	IK6
AMT-26145	18-26.5	20	27	9.5	+12	2.5	+19	2.2	2.2	+12	400	IK6
AMT-26146	18-26.5	26	34	9.0	+12	3.0	+19	2.2	2.2	+12	440	IK6
AMT-26147	18-26.5	31	39	9.0	+12	3.0	+19	2.2	2.2	+12	480	IK8
AMT-26148	18-26.5	38	46	9.0	+12	3.0	+19	2.2	2.2	+12	520	IK8
AMT-26185	18-26.5	20	27	8.5	+12	2.5	+19	2.2	2.2	+12	400	IK6
AMT-26186	18-26.5	26	34	8.0	+12	3.0	+19	2.2	2.2	+12	440	IK6
AMT-26187	18-26.5	31	39	8.0	+12	3.0	+19	2.2	2.2	+12	480	IK8
AMT-26188	18-26.5	38	46	8.0	+12	3.0	+19	2.2	2.2	+12	520	IK8

Note: Maximum safe input power: +10 dBm

AMT Series—Power Amplifiers

Preliminary Specifications @ 25°C Case Temperature

Model	Frequency Response (GHz)	Gain (dB)	Saturated Output Power (dBm)	VSWR		Input Power Voltage (VDC)	Input Power Current (mA)	Case Type
	Minimum	Minimum	Minimum	Maximum In	Maximum Out		Maximum	
AMT-24158	20-24	29	26	2.2	2.2	+12	1070	IK6R1
AMT-27056	24-27	25	22	2.2	2.5	+12	560	IK4

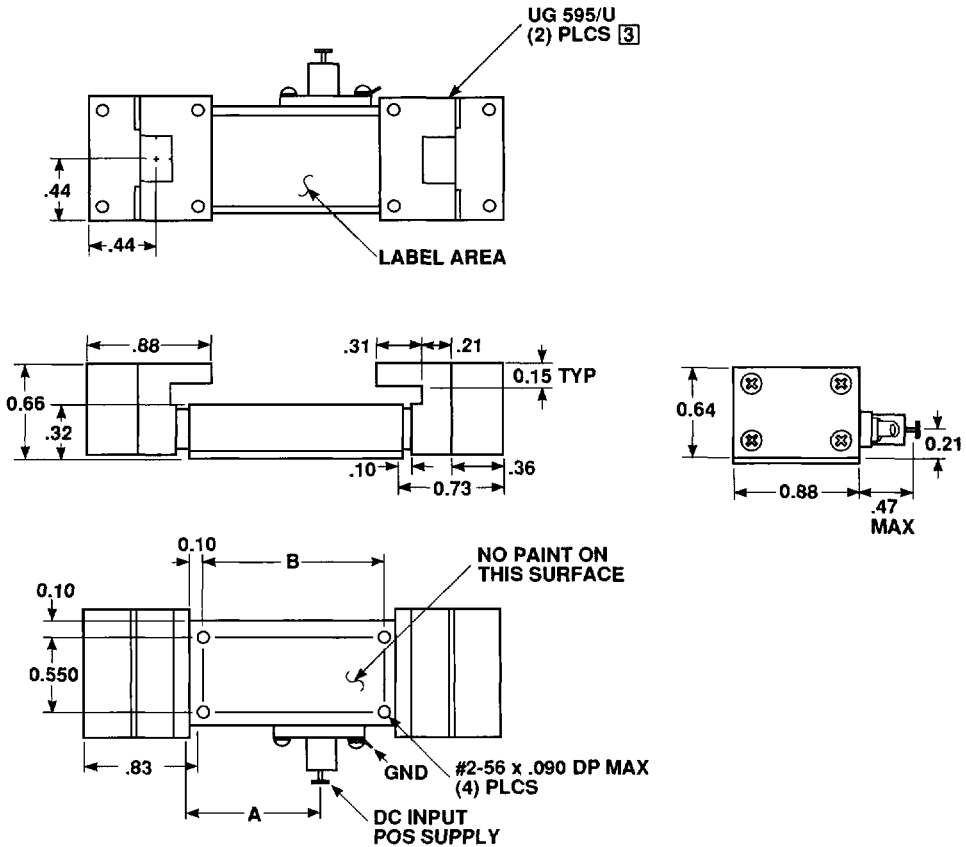
Notes: Maximum safe input power: +10 dBm

1. Contact Applications Engineering for case drawing.

The following RF connector options are available for the amplifiers on this page. Please specify option suffix at the time of order.

		INPUT	
		WG WR42	3 mm COAX
OUTPUT	WG WR42	-11	-31
	3 mm COAX	-13	-33

Case Drawings
IK Series
WR-42



CASE	DIMENSION	
	A	B
IK2	0.36	0.708
IK4	0.95	1.303
IK6	1.15	1.697
IK8	1.35	2.095

NOTES (UNLESS OTHERWISE SPECIFIED):

1. DIMENSIONS ARE SPECIFIED IN INCHES
2. TOLERANCES: .XX ± .01
.XXX ± .005

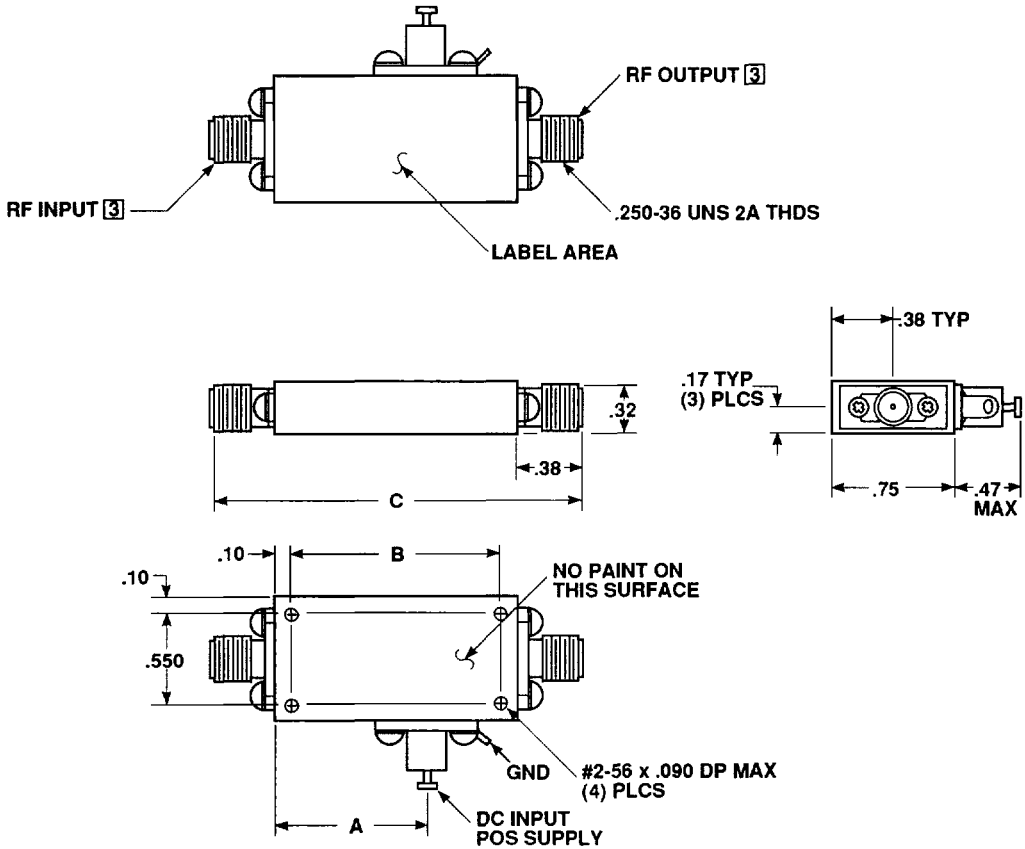
ALL TOLERANCES BEFORE PAINT AND/OR LABELING

[3] RF INPUT/OUTPUT CONNECTOR:

WR-42, UG 595/U

**AMT, AWT Series:
Wideband Millimeter Amplifiers**

**Case Drawing
IK Series
Coax**



CASE	DIMENSION		
	A	B	C
IK2	0.36	0.708	1.66
IK4	0.95	1.303	2.25
IK6	1.15	1.697	2.65
IK8	1.35	2.095	3.05

NOTES (UNLESS OTHERWISE SPECIFIED):

1. DIMENSIONS ARE SPECIFIED IN INCHES

2. TOLERANCES: .XX ± .01

.XXX ± .005

ALL TOLERANCES BEFORE PAINT AND/OR LABELING

③ RF INPUT/OUTPUT CONNECTOR:

3 MM SMA COMPATIBLE

AWT — High Performance and Temperature Compensated Connectorized Amplifier Series

AWT Series

Guaranteed Specifications @ 25°C Case Temperature

Model	Frequency Response (GHz)	Gain (dB)	Gain (dB)	Noise Figure (dB)	Power Output for 1 dB Gain Compression (dBm)	Gain Flatness (±dB)	Typical Third Order Intercept Point (dBm)	VSWR (50 ohms)		Input Power		Case Type
	Minimum	Minimum	Maximum	Maximum	Minimum	Maximum		Maximum In	Maximum Out	Voltage (VDC)	Current (mA) Maximum	
AWT-40032	18-40	8.0	14.0	9.0	+6	1.0	+13	3.0	3.0	+12	110	IK2
AWT-40034	18-40	15.0	21.0	9.0	+6	2.0	+13	3.0	3.0	+12	200	IK4
AWT-40035	18-40	21.0	28.0	8.0	+10	2.0	+16	3.0	3.0	+12	250	IK4
AWT-40036	18-40	24.0	32.0	8.0	+10	2.0	+16	3.0	3.0	+12	300	IK6
AWT-40038	18-40	33.5	42.5	8.0	+10	3.0	+16	3.0	3.0	+12	400	IK8
AWT-40039	18-40	39.5	49.5	8.0	+10	4.0	+16	3.0	3.0	+12	450	IK8

AWT Series — Temperature Compensated

Guaranteed Specifications @ -54° to +71°C Case Temperature

AWT-40046	18-40	17.0	25.0	10.0	+6	3.0	+13	3.0	3.0	+12	375	IK6
AWT-40048	18-40	24.5	34.5	10.0	+6	3.0	+13	3.0	3.0	+12	475	IK8
AWT-40410	18-40	32.5	43.5	10.0	+6	3.5	+13	3.0	3.0	+12	575	IK10

Note: Maximum safe input power: +10 dBm

AWT Series—Power Amplifiers

Preliminary Specifications @ 25°C Case Temperature

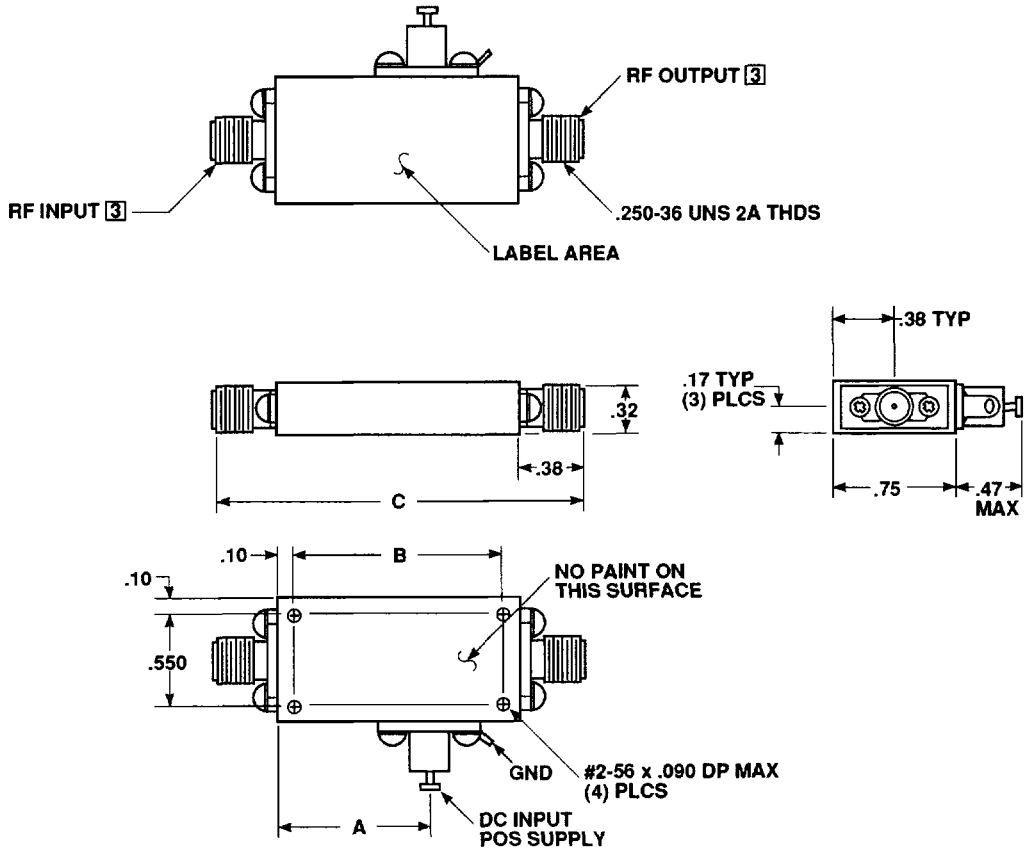
Model	Frequency Response (GHz)	Gain (dB)	Saturated Output Power (dBm)	VSWR		Input Power Voltage (VDC)	Input Power Current (mA)	Case Type
	Minimum	Minimum	Minimum	Maximum In	Maximum Out		Maximum	
AWT-40058	18-40	27	15.5	3.0	3.0	+12	620	IK6

Note: Maximum safe input power: +10 dBm

The amplifiers on this page are available only in a coax case style with 3 mm I/O. Please specify option suffix -33 at the time of order.

**AMT, AWT Series:
Wideband Millimeter Amplifiers**

**Case Drawing
IK Series
Coax**



CASE	DIMENSION		
	A	B	C
IK2	0.36	0.708	1.66
IK4	0.95	1.303	2.25
IK6	1.15	1.697	2.65
IK8	1.35	2.095	3.05

NOTES (UNLESS OTHERWISE SPECIFIED):

1. DIMENSIONS ARE SPECIFIED IN INCHES
 2. TOLERANCES: .XX ± .01
.XXX ± .005
- ALL TOLERANCES BEFORE PAINT AND/OR LABELING
- [3] RF INPUT/OUTPUT CONNECTOR:
3 MM SMA COMPATIBLE

AMT—High Performance and Temperature Compensated Connectorized Amplifier Series

AMT Series

Guaranteed Specifications @ 25°C Case Temperature

Model	Frequency Response (GHz)	Gain (dB)	Gain (dB)	Noise Figure (dB)	Power Output for 1 dB Gain Compression (dBm)	Gain Flatness (±dB)	Typical Third Order Intercept Point (dBm)	VSWR (50 ohms)		Input Power		Case Type
	Minimum	Minimum	Maximum	Maximum	Minimum	Maximum		Maximum In	Maximum Out	Voltage (VDC)	Current (mA) Maximum	
AMT-40032	26.5-40	10	15	10.0	+6	1.0	+13	2.5	2.5	+12	100	IK2
AMT-40033	26.5-40	13	18	10.0	+6	1.25	+13	2.5	2.5	+12	130	IK4
AMT-40034	26.5-40	20	26	9.0	+10	1.5	+16	2.5	2.5	+12	170	IK4
AMT-40035	26.5-40	27	33	9.0	+10	2.0	+16	2.5	2.5	+12	210	IK4
AMT-40036	26.5-40	31	38	9.0	+10	2.5	+16	2.5	2.5	+12	250	IK6
AMT-40037	26.5-40	38	46	9.0	+10	3.0	+16	2.5	2.5	+12	300	IK6
AMT-40038	26.5-40	38	46	9.0	+13	2.5	+19	2.5	2.5	+12	550	IK6
AMT-40072	26.5-40	10	15	7.5	+6	1.0	+13	2.5	2.5	+12	100	IK2
AMT-40073	26.5-40	13	18	7.5	+6	1.25	+13	2.5	2.5	+12	130	IK4
AMT-40074	26.5-40	20	26	7.0	+10	1.5	+16	2.5	2.5	+12	170	IK4
AMT-40075	26.5-40	27	33	7.0	+10	2.0	+16	2.5	2.5	+12	210	IK4
AMT-40076	26.5-40	31	38	7.0	+10	2.5	+16	2.5	2.5	+12	250	IK6
AMT-40077	26.5-40	38	46	7.0	+10	3.0	+16	2.5	2.5	+12	300	IK6

AMT Series—Temperature Compensated

Guaranteed Specifications @ -54° to +71°C Case Temperature

AMT-40086	26.5-40	24	32	10.0	+6	2.5	+13	2.5	2.5	+12	325	IK6
AMT-40087	26.5-40	27	35	9.0	+6	3.0	+13	2.5	2.5	+12	375	IK8
AMT-40088	26.5-40	34	43	9.0	+6	3.5	+13	2.5	2.5	+12	425	IK8
AMT-40046	26.5-40	24	32	11.0	+6	3.0	+13	2.5	2.5	+12	325	IK6
AMT-40047	26.5-40	27	35	10.0	+6	3.5	+13	2.5	2.5	+12	375	IK8
AMT-40048	26.5-40	34	43	10.0	+6	4.0	+13	2.5	2.5	+12	425	IK8

AMT Series—Power Amplifiers

Preliminary Specifications @ 25°C Case Temperature

Model	Frequency Response (GHz)	Gain @ Specified Output Power (dB)	Saturated Output Power (dBm)	VSWR		Input Power Voltage (+VDC)	Input Power Current (mA)	Case Type
	Minimum	Minimum	Minimum	Maximum In	Maximum Out	Maximum	Maximum	
AMT-28156	27-28	27	23	2.2	2.2	+12	760	IK4N ¹
AMT-40156	27-30	22	21	2.2	2.2	+12	650	IK4
AMT-40055	26.5-40	23	16	3.0	3.0	+12	510	IK4
AMT-40056	26.5-40	20	19	2.5	2.5	+12	900	IK4

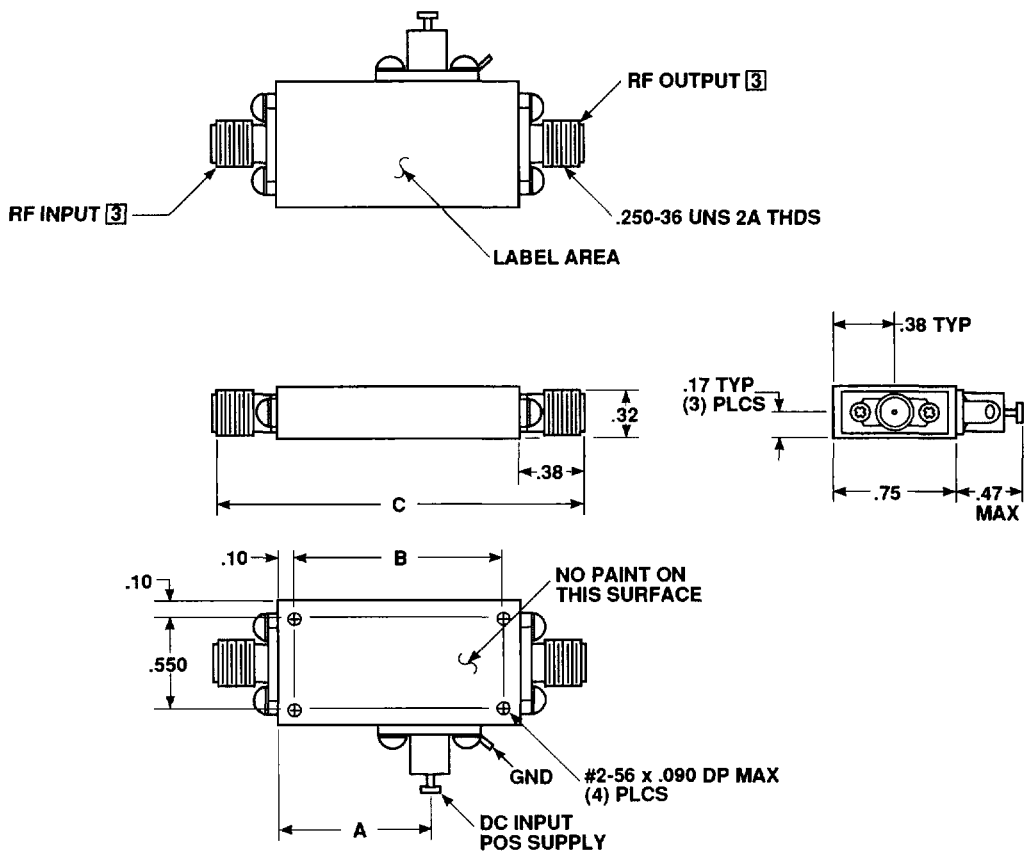
Notes: Maximum safe input power: +10 dBm
1. Contact Applications Engineering for case drawing.

The following RF connector options are available for the amplifiers on this page. Please specify option suffix at the time of order.

		INPUT	
		WG WR28	3 mm COAX
OUTPUT	WG WR28	-11	-31
	3 mm COAX	-13	-33

**AMT, AWT Series:
Wideband Millimeter Amplifiers**

**Case Drawing
IK Series
Coax**



CASE	DIMENSION		
	A	B	C
IK2	0.36	0.708	1.66
IK4	0.95	1.303	2.25
IK6	1.15	1.697	2.65
IK8	1.35	2.095	3.05

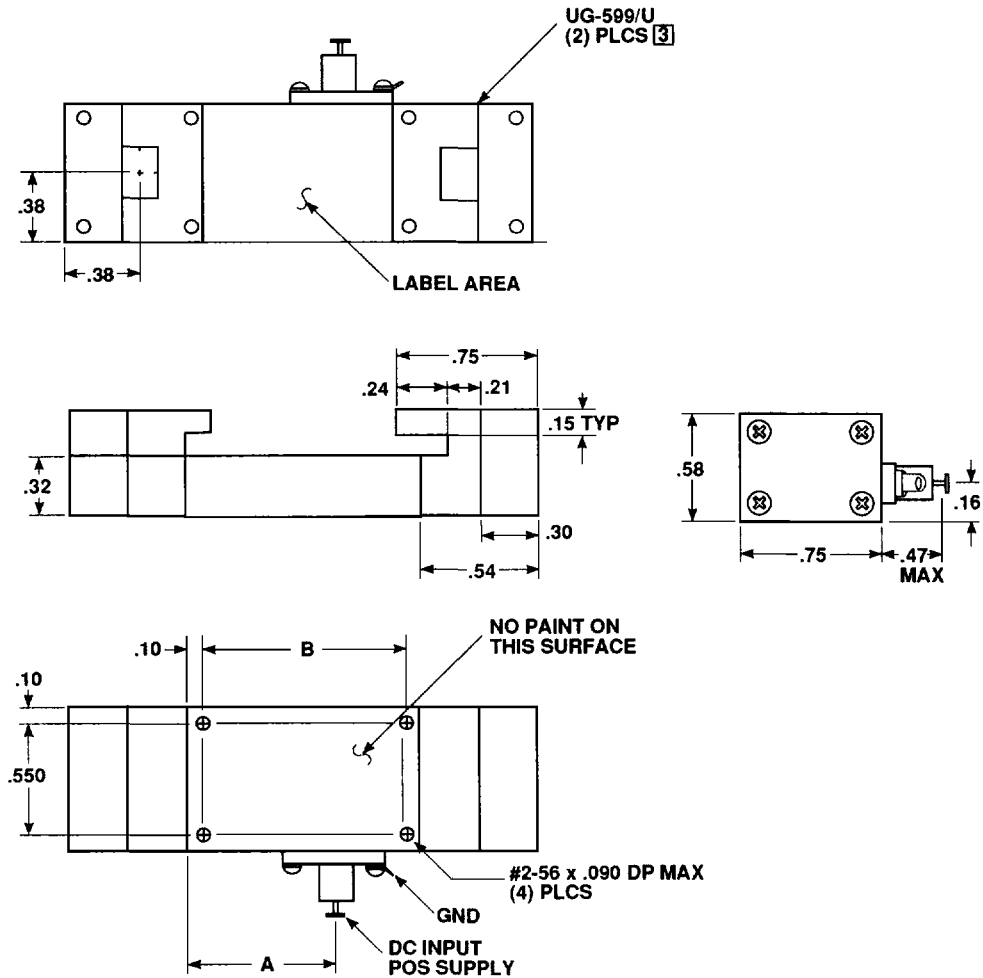
NOTES (UNLESS OTHERWISE SPECIFIED):

1. DIMENSIONS ARE SPECIFIED IN INCHES
2. TOLERANCES: .XX ± .01
.XXX ± .005

ALL TOLERANCES BEFORE PAINT AND/OR LABELING

- [3] RF INPUT/OUTPUT CONNECTOR:
3 MM SMA COMPATIBLE

Case Drawing
IK Series
WR-28



CASE	DIMENSION	
	A	B
IK2	0.36	0.708
IK4	0.95	1.303
IK6	1.15	1.697
IK8	1.35	2.095

NOTES (UNLESS OTHERWISE SPECIFIED):

1. DIMENSIONS ARE SPECIFIED IN INCHES
2. TOLERANCES: .XX ± .01
.XXX ± .005

ALL TOLERANCES BEFORE PAINT AND/OR LABELING

- [3] RF INPUT/OUTPUT CONNECTOR:
WR-28, UG 599/U