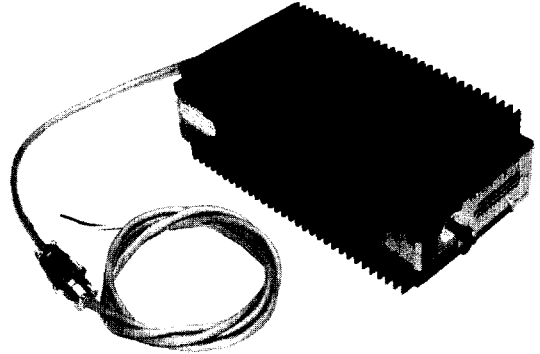

Features

- High Reliability
- Energy Efficiency
- FCC Type Accepted
- High Channel Loading Capacity
- Easy to Install
- No Maintenance Required
- Cost Competitive

AWP Series 3.7 to 11.7 GHz.



Narrowband General Purpose Description

Avantek's 4, 6, 7, 8 and 11 GHz amplifiers are cost-effective TWTA replacements. Their performance and reliability has been proven by the more than 10,000 units now in use throughout the world. The AWP series uses substantially less input power than a TWT, has more gain thus reducing AM/PM problems due to the lower output needed from the upconverter, and maintains a constant output power over its calculated lifetime (MTBF) of 30 years. In digital systems, at lowered gain levels, AWP amplifiers offer less than 0.25 dB compression with AM/PM of less than 0.25°/dB over the entire band.

CARS Band Description

The Avantek AW-13251 is a compact, high-performance GaAs FET preamplifier designed specifically to improve the performance of receivers in the 12.7 to 13.25 GHz CARS (Cable Antenna Relay Service), STL (Studio-Transmitter Link) and Intercity Relay band. As an add-on to existing receivers or as an integral part of a system design, the 4.0 dB typical noise figure and 15 dB typical gain of this amplifier can substantially improve the fade margin and increase the path length capability of a microwave relay system.

AWP—MEDIUM POWER COMMERCIAL COMMUNICATIONS BAND AMPLIFIERS

AWP Series

Guaranteed Specifications @ 25°C Case Temperature

Model	Frequency Response (GHz) Minimum	Power Output for 1 dB Gain Compression (dBm/watts) Minimum	Gain (dB) Min.	Gain Flatness (±dB) Max.	Typical Intercept Point for IM Products (dBm)	Noise Figure (dB) Max.	VSWR (50 ohms) Maximum		Input Power		Case Type
							In	Out	Voltage (VDC ±3%)	Current (mA) Typical	
AWP-42107	3.7-4.2	+25/3	26	2	+35	10	1.2	1.2	+15	500	SPG
AWP-42108	3.7-4.2	+32/1.5	33	2	+40	10	1.2	1.2	+15	1200	SPG
AWP-42109	3.7-4.2	+40/10	41	2	+47	10	1.2	1.2	+15	6000	SPG
AWP-64107	5.925-6.425	+25/3	26	2	+34	10	1.2	1.2	+15	500	SPG
AWP-64108	5.925-6.425	+32/1.5	33	2	+40	10	1.2	1.2	+15	1200	SPG
AWP-64109	5.925-6.425	+40/10	41	2	+46	10	1.2	1.2	+15	6000	SPG
AWP-71107	6.425-7.125	+25/3	26	2	+34	10	1.2	1.2	+15	500	SPG
AWP-71108	6.425-7.125	+32/1.5	33	2	+40	10	1.2	1.2	+15	1200	SPG
AWP-71109	6.425-7.125	+40/10	41	2	+46	10	1.2	1.2	+15	6000	SPG
AWP-77107	7.125-7.725	+25/3	26	2	+34	10	1.2	1.2	+15	500	SPG
AWP-77108	7.125-7.725	+32/1.5	33	2	+40	10	1.2	1.2	+15	1200	SPG
AWP-77109	7.125-7.725	+40/10	41	2	+46	10	1.2	1.2	+15	6000	SPG
AWP-83107	7.725-8.275	+25/3	26	2	+34	10	1.2	1.2	+15	500	SPG
AWP-83108	7.725-8.275	+32/1.5	33	2	+40	10	1.2	1.2	+15	1200	SPG
AWP-83109	7.725-8.275	+40/10	41	2	+47	10	1.2	1.2	+15	6000	SPG
AWP-117107	10.7-11.7	+25/3	26	2	+32	10	1.2	1.2	+15	500	SPG
AWP-117108	10.7-11.7	+32/1.5	33	2	+39	10	1.2	1.2	+15	1200	SPG
AWP-117109	10.7-11.7	+40/10	41	2	+47	10	1.2	1.2	+15	6000	SPG

Note:

1. Units are available with or without top and/or bottom heatsinks.

AW—CARS BAND RECEIVER PREAMPLIFIER

AW Series

Guaranteed Specifications @ 25°C Case Temperature

Model	Frequency Range (GHz) Minimum	Noise Figure (dB) Maximum	Gain (dB) Min.	Gain Flatness (±dB) Max.	Power Output @ 1 dB Gain Compression (dBm) Minimum	Typ. Intercept Point for Third Order Intermod Products (dBm) Minimum	VSWR (50 ohms) Maximum		Input Power		Case Type
							In	Out	Voltage	Current (mA) Typical	
AW-13251	12.7-13.25	4.0	15	0.5	+10	+20	1.25	1.25	+15 VDC	50	AWJ

AW—CARS BAND POWER AMPLIFIER

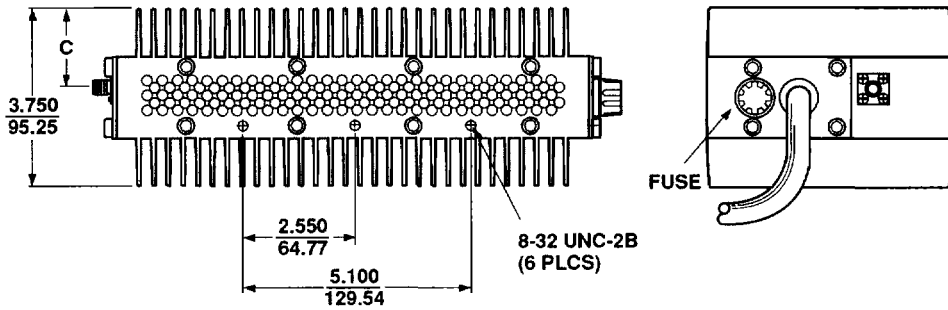
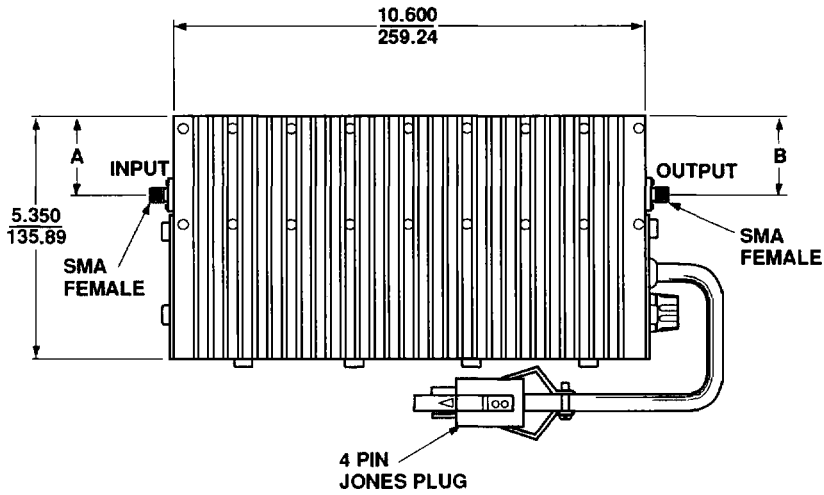
AWP Series

Guaranteed Specifications @ 25°C Case Temperature

Model	Frequency Range (GHz) Minimum	Noise Figure (dB) Maximum	Gain (dB) Min.	Gain Flatness (±dB) Max.	Power Output @ 1 dB Gain Compression (dBm) Minimum	Typ. Intercept Point for Third Order Intermod Products (dBm) Minimum	VSWR (50 ohms) Maximum		Input Power		Case Type
							In	Out	Voltage	Current (mA) Typical	
AWP-132200	12.7-13.15	13	47	1.5	+37	+35	1.25	1.25	105-130 VAC	140 W max	AWP

Case Drawing
SPG

Narrowband Power Amplifier



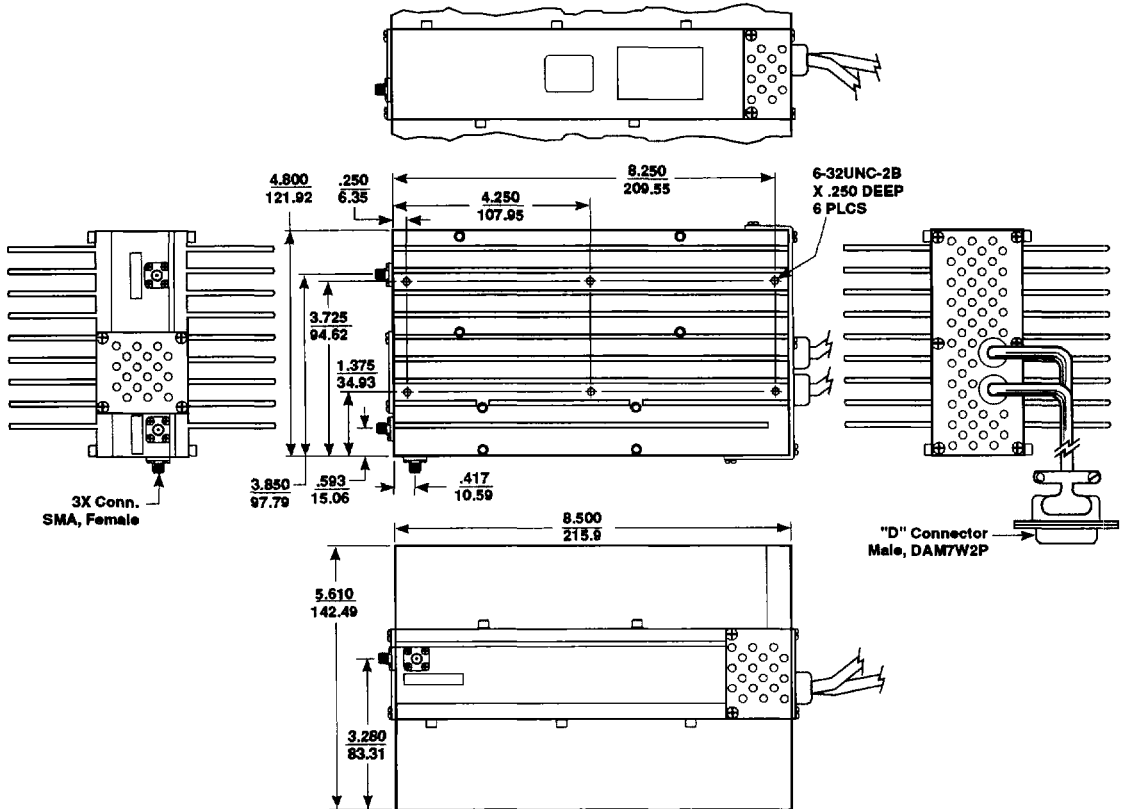
PART NUMBER	DIMENSION			CASE
	A	B	C	
AWP-42107,8,9	1.400	.665	1.907	SPG-1
AWP-64107,8,9	1.580	.674	1.891	SPG-2
AWP-71107,8,9	1.525	.975	1.891	SPG-3
AWP-77107,8,9	1.525	.975	1.891	SPG-3
AWP-83107,8,9	1.525	.975	1.891	SPG-3
AWP-117107,8	1.750	1.645	1.650	SPG-4
AWP-117109	1.475	1.065	1.650	SPG-5

NOTES (UNLESS OTHERWISE SPECIFIED):

1. DIMENSIONS ARE SPECIFIED IN $\frac{\text{INCHES}}{\text{MM}}$
2. TOLERANCES: .XX $\pm .02$
 ± 0.5
 .XXX $\pm .010$
 ± 0.25

Case Drawing
AWP-132200

3 Watt Linear Solid State Amplifier



NOTES (UNLESS OTHERWISE SPECIFIED):

- DIMENSIONS ARE SPECIFIED IN $\frac{\text{INCHES}}{\text{MM}}$
- TOLERANCES: .XX ± 0.02
 $\pm .5$
 .XXX ± 0.010
 $\pm .25$