

Our Founder Wanted To Create The ...

New "U" Series amplifiers
10kHz - 1000MHz
Single Band 1, 2.5, 10, 25,
50, 100 Watts
Low Cost/High Performance

Now Up
To 250 Watts!



Widest Bandwidth Amplifiers In The Industry

Introducing the AR “U” (Universal) Series Amplifiers 10 kHz-1000 MHz

“Wouldn’t it be great if a single 1, 2.5, 5, 10, 25, 50, 100* or 250* watt RF amplifier could span the entire frequency range of 10 kHz – 1000 MHz?” That’s what our founder, Don “Shep” Shepherd said. We agreed it would be great, but we knew there was a reason no one had done it.

So we put our engineers to work figuring out ways to expand the frequency range while keeping the cost low and the performance and quality high. It wasn’t easy, but we designed a series of amplifiers with the widest bandwidth in the industry. They’re compact, affordable, high performance, and very reliable. These new “U” Series amplifiers can serve unlimited applications across multiple industries. These new amps also prove something Shep has always said: “Nothing is impossible when you’re really committed to achieving a goal!”



* The new 100U1000 and 250U1000 cover the 100 kHz - 1000 MHz frequency range.



Product Demonstration: Single Band Amplifier Covers 10kHz to 1000 MHz Frequency Band

Rob Rowe, AR's Manager of Engineering, demonstrates AR's “U” series amplifiers. These amplifiers are self-contained, air-cooled, broadband, Class A solid-state amplifiers designed for applications where instantaneous bandwidth, high gain and linearity are required. During this presentation you will see representative models from 1-watt to 100-watts, learn their key features and how the product family benefits your applications, and see a demo of the 100-watt model.

Visit www.arworld.us/html/video-u-series-amplifiers.asp

"U" Series Amplifiers 10 kHz - 1000 MHz

1U1000



1 watt CW, 10 kHz-1000 MHz

Rated Output Power	1 watt min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 1.5 watts / Min. 1 watt
Power Output @ 1dB compression	Typ. 1.5 watts / Min. 1 watt
Flatness	±0.8 dB typ., ±1.0 dB max.
Frequency Response	10 kHz - 1000 MHz instantaneously
Gain (at max. setting)	30 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	42 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 1 watt, minus 30dBc typ.
Spurious	Minus 73 dBc typ.
Primary Power (selected automatically)	90 - 264 VAC 50/60 Hz, 50 watts
Connectors	RF Input Type N female on front panel RF Output Type N female on front panel
Cooling	Forced air (self contained fans)
Weight	4.5 kg (11 lb)
Size (WxHxD)	26.0 x 11.4 x 28.2 cm / 10.25 x 4.5 x 11.1 in
Export classification	EAR99

2.5U1000



2.5 watts CW, 10 kHz-1000 MHz

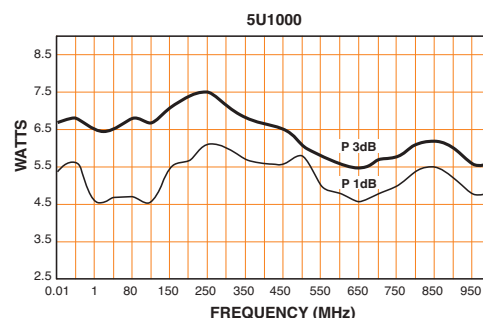
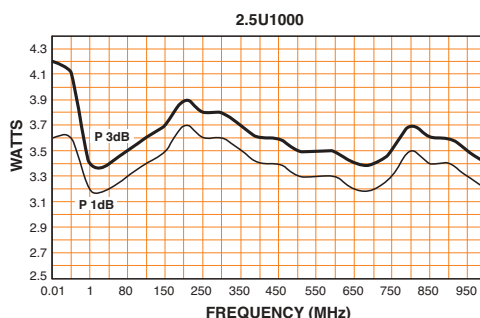
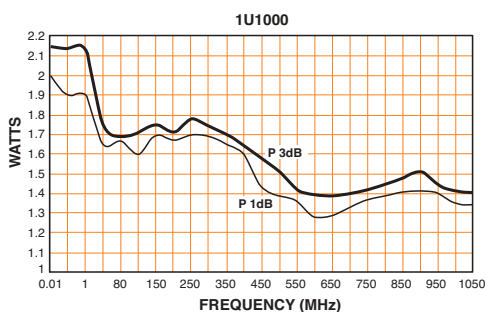
Rated Output Power	2.5 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 3.0 watts / Min. 2.5 watts
Power Output @ 1dB compression	Typ. 2.5 watts / Min. 2 watts
Flatness	±0.8 dB typ., ±1.0 dB max.
Frequency Response	10 kHz - 1000 MHz instantaneously
Gain (at max. setting)	33 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	45 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 2 watts
Spurious	Minus 73 dBc typ.
Primary Power (selected automatically)	90 - 264 VAC 50/60 Hz, 50 watts
Connectors	RF Input Type N female on front panel RF Output Type N female on front panel
Cooling	Forced air (self contained fans)
Weight	4.5 kg (11 lb)
Size (WxHxD)	26.0 x 11.4 x 28.2 cm / 10.25 x 4.5 x 11.1 in
Export classification	EAR99

5U1000



5 watts CW, 10 kHz-1000 MHz

Rated Output Power	5 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 5.0 watts / Min. 4.5 watts
Power Output @ 1dB compression	Typ. 4 watts / Min. 3.5 watts
Flatness	±1.3 dB typ., ±1.5 dB max.
Frequency Response	10 kHz - 1000 MHz instantaneously
Gain (at max. setting)	37 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	46 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 3.5 watts
Spurious	Minus 73 dBc typ.
Primary Power (selected automatically)	90 - 264 VAC 50/60 Hz, 70 watts
Connectors	RF Input Type N female on front panel RF Output Type N female on front panel
Cooling	Forced air (self contained fans)
Weight	4.5 kg (11 lb)
Size (WxHxD)	26.0 x 11.4 x 28.2 cm / 10.25 x 4.5 x 11.1 in
Export classification	EAR99



10U1000



10 watts CW, 10 kHz - 1000 MHz

Rated Output Power	15 watts typ., 10 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 15 watts / Min. 10 watts
Power Output @ 1dB compression	Typ. 12 watts / Min. 10 watts
Flatness	±1.0 dB typ., ±1.5 dB max.
Frequency Response	10 kHz - 1000 MHz instantaneously
Gain (at max. setting)	40 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	50 dBm typ.
Noise Figure	8 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 10 watts
Spurious	Minus 73 dBc typ.
Primary Power (Universal; selected automatically)	100 - 240 VAC 50/60 Hz, 150 watts
Connectors	RF Input Type N female RF Output Type N female
Remotes Package	IEEE-488 24-pin female RS-232 9-pin subminiature D (female) Fiber optic ST Conn Tx and Rx RS-232 USB 2.0 Type B Ethernet RJ-45 Safety Interlock 15-pin subminiature D
Cooling	Forced air (self contained fans)
Weight	With Cabinet 17.7 kg (41 lb) Without Cabinet 9.5 kg (23 lb)
Size (WxHxD)	With Cabinet 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in Without Cabinet 48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in
Export classification	EAR99

25U1000



25 watts CW, 10 kHz - 1000 MHz

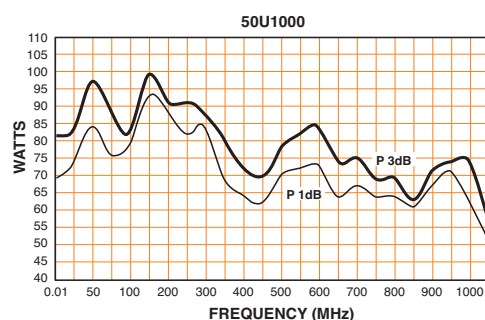
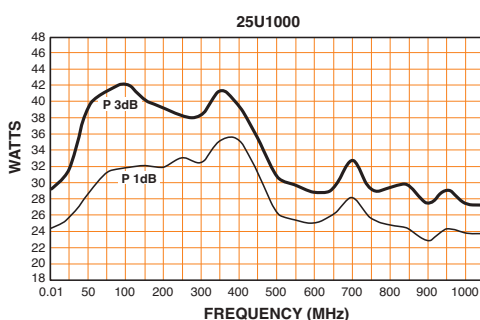
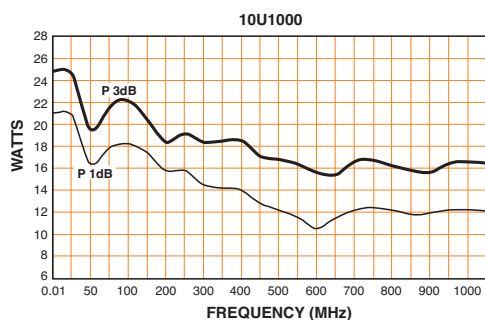
Rated Output Power	30 watts typ., 25 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 30 watts / Min. 25 watts
Power Output @ 1dB compression	Typ. 25 watts / Min. 20 watts
Flatness	±1.0 dB typ., ±1.5 dB max.
Frequency Response	10 kHz - 1000 MHz instantaneously
Gain (at max. setting)	44 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	52 dBm typ.
Noise Figure	8 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 20 watts
Spurious	Minus 73 dBc typ.
Primary Power (Universal; selected automatically)	100 - 240 VAC 50/60 Hz, 200 watts
Connectors	RF Input Type N female RF Output Type N female
Remotes Package	IEEE-488 24-pin female RS-232 9-pin subminiature D (female) Fiber optic ST Conn Tx and Rx RS-232 USB 2.0 Type B Ethernet RJ-45 Safety Interlock 15-pin subminiature D
Cooling	Forced air (self contained fans)
Weight	With Cabinet 17.7 kg (41 lb) Without Cabinet 9.5 kg (23 lb)
Size (WxHxD)	With Cabinet 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in Without Cabinet 48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in
Export classification	EAR99

50U1000



50 watts CW, 10 kHz - 1000 MHz

Rated Output Power	70 watts typ., 50 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 70 watts / Min. 50 watts
Power Output @ 1dB compression	Typ. 60 watts / Min. 45 watts
Flatness	±1.0 dB typ., ±1.5 dB max.
Frequency Response	10 kHz - 1000 MHz instantaneously
Gain (at max. setting)	47 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	57 dBm typ.
Noise Figure	8 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 45 watts
Spurious	Minus 73 dBc typ.
Primary Power (Universal; selected automatically)	100 - 240 VAC 50/60 Hz, 250 watts
Connectors	RF Input Type N female RF Output Type N female
Remotes Package	IEEE-488 24-pin female RS-232 9-pin subminiature D (female) Fiber optic ST Conn Tx and Rx RS-232 USB 2.0 Type B Ethernet RJ-45 Safety Interlock 15-pin subminiature D
Cooling	Forced air (self contained fans)
Weight	With Cabinet 17.7 kg (41 lb) Without Cabinet 9.5 kg (23 lb)
Size (WxHxD)	With Cabinet 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in Without Cabinet 48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in
Export classification	EAR99



"U" Series Amplifiers 100 kHz to 1000 MHz

100U1000



250U1000



100 watts CW, 100 kHz to 1000 MHz

Rated Output Power	120 watts typ., 100 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	Typ. 120 watts / Min. 100 watts
Power Output @ 1dB compression	Typ. 100 watts / Min. 85 watts
Flatness	±1.5 dB typ., ±2.0 dB max.
Frequency Response	100 kHz - 1000 MHz instantaneously
Gain (at max. setting)	50 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2.0:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	60 dBm typ.
Noise Figure	8.5 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 100 watts Minus 30 dBc typical at 100 watts
Spurious	Minus 73 dBc typ.
Primary Power (Universal; selected automatically)	100 - 240 VAC 50/60 Hz, 700 watts
Connectors	RF Input: Type N female RF Output: Type N female
Remotes Package	IEEE-488: 24-pin female RS-232: 9-pin subminiature D (female) Fiber optic: ST Conn Tx and Rx USB 2.0: Type B Ethernet: RJ-45 Safety Interlock: 15-pin subminiature D
Cooling	Forced air (self contained fans)
Weight	With Cabinet: 35 kg (77 lb) Without Cabinet: 24 kg (52 lb)
Size (WxHxD)	With Cabinet: 50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in Without Cabinet: 48.3 x 17.7 x 74.9 cm / 19 x 7.0 x 29.5 in
Export classification	EAR99

250 watts CW, 100 kHz to 1000 MHz

Rated Output Power	0.1 - 650 MHz: 250 watts typ., 250 watts min. 650 - 1000 MHz: 225 watts typ., 200 watts min.
Input For Rated Output	1.0 milliwatt max.
Power Output @ 3dB compression	0.1 - 650 MHz: 265 watts typ., 240 watts min. 650 - 1000 MHz: 215 watts typ., 190 watts min.
Power Output @ 1dB compression	0.1 - 650 MHz: 250 watts typ., 210 watts min. 650 - 1000 MHz: 200 watts typ., 175 watts min.
Flatness	±1.5 dB typ., ±2.0 dB max.
Frequency Response	100 kHz - 1000 MHz instantaneously
Gain (at max. setting)	54 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 1.5:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance*	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
Modulation Capability	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	62 dBm typ.
Noise Figure	8.5 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 200 watts Minus 30 dBc typical at 200 watts
Spurious	Minus 73 dBc typ.
Primary Power	100 - 240 VAC 50/60 Hz, 1100 watts
Connectors	RF Input: Type N female RF Output: Type N female
Remotes Package	IEEE-488: 24-pin female RS-232: 9-pin subminiature D (female) Fiber optic: ST Conn Tx and Rx USB 2.0: Type B Ethernet: RJ-45 Safety Interlock: 15-pin subminiature D
Cooling	Forced air (self contained fans)
Weight	With Cabinet: 45 kg (99 lb) Without Cabinet: 34 kg (74 lb)
Size (WxHxD)	With Cabinet: 50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in Without Cabinet: 48.3 x 17.7 x 74.9 cm / 19 x 7.0 x 29.5 in
Export classification	EAR99

