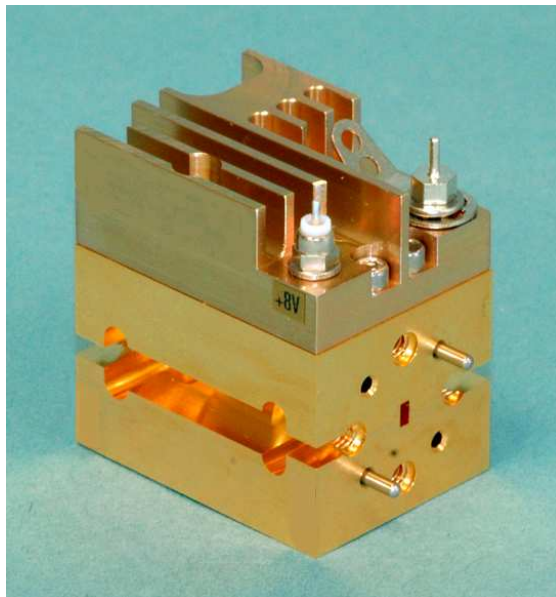


SERIES AMP
POWER AMPLIFIERS AND DRIVER AMPLIFIERS

FEATURES:

- Wideband coverage
- Modular compact design
- Military or commercial units available
- K,V or Waveguide interfaces as required
- Internal voltage regulation and bias circuitry
- State-of-the-art output power performance

APPLICATIONS:

- Transmitters
- LO amplification
- Amplified sources
- Radar front-ends
- Communication subsystems
- Remote Sensing
- Radiometer Systems

DESCRIPTION

Millitech's series AMP power amplifiers utilize advanced PHEMT MMICs and transistors to obtain high output power in the 18 to 110 GHz frequency range.

Each amplifier has internal bias circuitry that generates gate control voltages, provides proper voltage sequencing and incorporates reverse voltage protection from a single positive external bias.

The standard amplifier interfaces include coaxial connectors of 2.9 mm (K), (0 to 40 GHz), and 2.4 mm (V), (0 to 50 GHz), as well as waveguide interfaces ranging from WR-42 to WR-10.

Standard products offer sufficient gain and output power for many applications but multiple MMIC amplifier chips can be combined or cascaded for applications that require higher gain or greater output power.

The broad bandwidth and high power of the series AMP power amplifier makes them perfect for a wide range of applications including transceivers and upconverters, EW systems, instrumentation and radar systems. For applications requiring low noise amplification, please refer to series LNA, Millitech's low noise amplifiers.

SPECIFICATIONS
Power Amplifiers

Part Number	F _{Low}	F _{High}	Gain (typ.) (dB)	1dBCP (typ.) (dBm)	Psat (typ.) (dBm)	Connector	Current (A) (typ. at Psat) ^{***}	Input Voltage (V) (min-max)
AMP-KK-01190	18	23	23	30	*	K Connector	0.85	9 – 12
AMP-42-01190	18	23	24	30.5	*	WR-42	0.85	9 – 12
AMP-42-02030	18	26.5	23 to 18	23	*	WR-42	0.80	6 – 15
AMP-42-02230	18	26.5	19	26.5	*	WR-42	1.30	8 – 15
AMP-KK-01020	18.5	26.5	11	28	*	K Connector	0.54	9 – 15
AMP-42-01020	18.5	26.5	12	28.5	*	WR-42	0.54	9 – 15
AMP-42-02040	20	26.5	23	21	*	WR-42	0.60	8 – 15
AMP-42-01040	23.5	26.5	20	28	29.5	WR-42	0.70	9 – 15
AMP-28-22330	25	27	26	28	*	WR-28	0.75	9 – 15
AMP-KK-02230	18	28	18	26	*	K Connector	1.30	8 – 15
AMP-KK-01040	23.5	29	18.5	27.5	29	K Connector	0.70	9 – 15
AMP-28-01040	26.5	29	20	28	29.5	WR-28	0.70	9 – 15
AMP-KK-01080	26	31	21.5	32	32.5	K Connector	4.00	7 – 8
AMP-28-01080	26.5	31	23	33	33.5	WR-28	4.00	7 – 8
AMP-KK-01200	28	31	21.5	33.5	34	K Connector	3.30	7 – 9
AMP-28-01200	28	31	22.5	33.5	34	WR-28	3.30	7 – 9
AMP-KK-01050	28	31	20.5	26.5	*	K Connector	0.50	9 – 15
AMP-28-01050	28	31	22	27	*	WR-28	0.50	9 – 15
AMP-KK-01210	28	31	18	28.5	29	K Connector	0.80	8 – 12
AMP-28-01210	28	31	19.5	29	29.5	WR-28	0.80	8 – 12
AMP-KK-02030	18	32	22 to 16.5	23	*	K Connector	0.80	6 – 15
AMP-28-02030	26.5	32	17	24	*	WR-28	0.80	6 – 15
AMP-KK-02240	25	33	14.5	26	*	K Connector	1.30	8 – 15
AMP-28-02240	26.5	33	16	26.5	*	WR-28	1.30	8 – 15
AMP-KK-02050	27	35	16.5	22	*	K Connector	0.30	9 – 15
AMP-28-02050	27	35	18	23	*	WR-28	0.30	9 – 15
AMP-KK-01090	31	35	15.5	30	32	K Connector	1.50	8 – 13
AMP-28-01090	31	35	17	30.5	32.5	WR-28	1.50	8 – 13
AMP-28-21180	31	35	37	28	*	WR-28	1.50	8 – 13
AMP-22-01090	33	35	17	30.5	32.5	WR-22	1.50	8 – 13
AMP-28-02320	30	36	21	23	*	WR-28	0.60	8 – 15

*Contact Millitech for details

Power Amplifiers

Part Number	F _{Low}	F _{High}	Gain (typ.) (dB)	1dBCP (typ.) (dBm)	Psat (typ.) (dBm)	Connector	Current (A) (typ. at Psat)***	Input Voltage (V) (min-max)
AMP-28-01230	32	36	17	*	33	WR-28	4.00	7 – 8.5
AMP-KK-01170	33	36	13.5	29	30.5	K Connector	1.40	9 – 13
AMP-28-01170	33	36	15	30	31.5	WR-28	1.40	9 – 13
AMP-22-01170	33	36	15	30	31.5	WR-22	1.40	9 – 13
AMP-KK-02040	20	40	18	19	*	K Connector	0.60	8 – 15
AMP-28-02040	26.5	40	19	20	*	WR-28	0.60	8 – 15
AMP-22-01180	30	40	15	30	31	WR-22	2.00	7.5 – 11
AMP-KK-01180	30	40	13	29	30	K Connector	2.00	7.5 – 11
AMP-28-01180	30	40	15	30	31	WR-28	2.00	7.5 – 11
AMP-28-22320	30	40	36	19	*	WR-28	0.35	7 – 15
AMP-KK-01100	36	40	11	26.5	*	K Connector	1.50	9 – 13
AMP-28-01100	36	40	13	27.5	*	WR-28	1.50	9 – 13
AMP-22-01100	36	40	13	27.5	*	WR-22	1.50	9 – 13
AMP-22-02250	36	42.5	13.5	25.5	*	WR-22	1.10	8 – 15
AMP-22-02040	33	45	18	19	*	WR-22	0.60	8 – 15
AMP-22-02070	37	45	20	21.5	*	WR-22	0.60	7 – 15
AMP-22-01160	40	45	9	26.5	*	WR-22	1.00	9 – 10
AMP-22-01120	41	46	13	30	31	WR-22	2.70	8 – 10
AMP-22-02340	43	46	16	21	*	WR-22	0.20	6 – 15
AMP-19-02340	43	46	16	21	*	WR-19	0.20	6 – 15
AMP-19-02100	50	60	22	15	*	WR-19	0.25	7 – 15
AMP-15-02100	50	66	22	15	*	WR-15	0.25	7 – 15
AMP-12-02280	71	76	23	16.5	*	WR-12	0.20	5 – 15
AMP-12-02330	76	81	17 - 21	13	*	WR-12	0.20	5 – 15
AMP-12-02310	75	87	16	13	*	WR-12	0.20	5 – 15
AMP-10-02310	75	87	16	13	*	WR-10	0.20	5 – 15
AMP-12-02290	80	90	20	16	*	WR-12	0.25	5 – 15
AMP-10-02290	80	90	20	16	*	WR-10	0.25	5 – 15
AMP-10-22350	84	92	35	14	*	WR-10	0.50	6 – 15
AMP-10-02150	91	95	9	19	*	WR-10	0.30	5 – 15
AMP-10-22190	91	95	30	19	*	WR-10	0.60	5 – 15
AMP-10-02370	92	96	14.5	17	*	WR-10	0.30	6 – 15
AMP-10-22380	92	96	33	17	*	WR-10	0.60	6 – 15

*Contact Millitech for details

AMP-10-22360	84	98	38	13	*	WR-10	0.5	6 – 15
AMP-10-22300	92	98	40	13	*	WR-10	0.5	5 – 15
AMP-10-02260	90	99	20	12	*	WR-10	0.3	5 – 15
AMP-10-02130	75	110	14	10	*	WR-10	0.2	5 – 15

Power-Combined Amplifiers

Part Number	F _{Low}	F _{High}	Gain (typ.) (dB)	1dBCP (typ.) (dBm)	Psat (typ.) (dBm)	Connector**	Current (A) (typ. at Psat)***	Input Voltage (V) (min-max)
AMP-28-03010	30	34	15	32.5	33.5	WR-28	4.00	7.5 – 8.3
AMP-28-03020	34	36	14	35	36.5	WR-28	8.00	7.5 – 8
AMP-28-03030	34	40	14	32.5	33.5	WR-28	4.00	7.5 – 8.3
AMP-22-03040	43.5	45.5	14	35	36.5	WR-22	10.80	8 – 8.5
AMP-19-03050	50	56	22	22	24	WR-19	2.00	7 - 10
AMP-15-03060	56	62	19	22	24	WR-15	2.00	7 - 10
AMP-15-03070	60	64	20	17.5	19.5	WR-15	0.50	7 – 12
AMP-15-03080	60	64	19	20	22	WR-15	1.00	7 - 9
AMP-15-03090	60	64	18	22	24	WR-15	2.00	7 – 8
AMP-15-03100	60	66	21	17.5	19.5	WR-15	0.50	7 - 12
AMP-15-03110	60	66	19	22	24	WR-15	2.00	7 – 8
AMP-12-03120	71	76	20	19	21	WR-12	0.40	5 - 15
AMP-10-03130	76	84	15	15.5	17.5	WR-12	0.40	5 - 15
AMP-12-03140	78	86	16	15.5	17.5	WR-10	0.40	5 - 15
AMP-12-03150	81	86	21	18.5	21	WR-12	0.50	5 - 15
AMP-10-03160	84	90	22	17.5	20	WR-10	0.50	5 - 15
AMP-10-23170	92	95	29	21.5	23	WR-10	1.20	5 – 12
AMP-10-23180	92	95	28	24	25.5	WR-10	2.40	5 - 10
AMP-10-03190	92	96	14	19	22	WR-10	0.60	5 - 14

**Additional connectors may be available

***Quiescent current is 50-70% of current at Psat

****Some part numbers are ITAR controlled. Please call Millitech for details.

