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DC/DC

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CONVERTERS

Astec Modular Power Supply System (AMPSS®) offers an off-the-shelf solution to system power. Featuring high reliability and efficiency, and convenient control and monitoring functions, the AMPSS® family of DC/DC modules is designed to reduce product development time, and enhance system flexibility and performance.

The AMPSS® range enables modular design and implementation of distributed power supply systems. Here the front end converter uses input AC to generate a semi-regulated DC bus voltage of typically 300, 48, 28 or 24V. The semi-regulated bus voltage is then distributed to the DC/DC converters that are at the point of load. Output regulation is done individually by each DC/DC converter to point of use.

The AMPSS® range offers the widest choice of standard DC/DC converters in the industry from 1W to 500W. All are available in compact high density packages using fixed frequency switching to minimize noise and provide more than 1,000,000 hours MTBF. For low power (<50W), AMPSS® has a range of Micro Regulators in industry standard size packages. In the high power range, the AMPSS® Power Modules are available in a number of series. Choices include models which provide economical power conversion with basic control functions to high performance models featuring sophisticated control, programming and monitoring functions. Modules may be connected in series or parallel to meet exact power requirements. From distributed power systems to stand-alone operation, AMPSS® modules are suitable for the full spectrum of applications.

DC/DC CONVERTERS

OUTPUT POWER	MODEL SERIES	OUTPUT VOLTAGES			PAGE
		SINGLE	DUAL	TRIPLE	
1W	AA01A		12V,-12V		91
5W	AA05A	5V or 12V or 15V	12V,-12V 15V,-15V		91
5W	AA05C	5V or 12V or 15V	12V,-12V 15V,-15V		91
6W	AA05B	5V or 12V or 15V	12V,-12V 15V,-15V		91
6W	AA05D	5V or 12V or 15V	12V,-12V 15V,-15V		91
10W	AA10B	5V or 12V or 15V	5V,-5V 12V,-12V 15V,-15V		91
10W	AA10U	5V or 12V or 15V	5V,-5V 12V,-12V 15V,-15V		91
13W	AA13A	3.3V			91
15W	AA15A	5V or 12V or 15V	12V,-12V 15V,-15V	5V, 12V,-12V 5V, 15V,-15V	91
15W	AA15B	5V or 12V or 15V	12V,-12V 15V,-15V		91
20W	AA20B	5V or 12V or 15V	12V,-12V 15V,-15V	5V, 12V,-12V 5V, 15V,-15V	91
25W	AA25A			5V, 12V,-12V 5V, 15V,-15V	91
25W	AA25B	5V or 12V or 15V	12V,-12V 15V,-15V		91
25W	AA25C			5V, 12V,-12V 5V, 15V,-15V	91
25W	AA25D	3.3V			91
25W	AA25E	3.3V			91
30W	AA30A	15V	12V,-12V		91
30W	AA30C		12V,-12V		91
32W	AA32A	3.3V			91
40W	AA40A	5V			91
40W	AA40C	5V	5V,-5V		91
50W	AA50A	5V or 12V or 15V		5V, 12V,-12V 5V, 15V,-15V	91
50W	AK60A	5V or 12V or 15V			93
75W	AK60A	5V or 12V or 15V			93
100W	AK60A	5V or 12V or 15V			93
120W	AL60A	2.2V or 3.3V or 5V or 12V or 15V			93
150W	BK60A	5V or 12V or 15V			93
240W	AK80A	3.3V or 5V or 12V or 15V			93
240W	AL80A	2.2V or 3.3V or 5V or 6.3V or 12V or 15V			93
240W	AM80A	1.2V or 2.2V or 3.3V or 5V or 6.5V or 12V or 15V or 24V or 28V	3.3V, 5V		93
300W	BM80A	2.2V or 3.3V or 5V			93
500W	DJ80A	24V or 48V			95
1200W	PFC	385V			96
--	Heatsinks & Accessories				97

AMPSS



AMPSS Micro Regulators 1 to 50 Watts • AMR Series

The AMR DC/DC Converter series is part of Astec's family of advanced modular power supply components. Featuring high reliability and convenient control functions, these modules are designed to reduce product development time and enhance system performance. The AMR Series range from 1 to 50 watts and are available in industry standard size footprints with single, dual or triple outputs in a compact package. The units are ideally suited for telecommunications, industrial, computer and distributed power system applications.

SPECIAL FEATURES

- High efficiency
- Industry standard packaging
- 100% computerized final testing
- Overvoltage protection
- Six sided shielding
- Surface mount technology
- Single, dual and triple outputs
- Regulated outputs

ENVIRONMENTAL

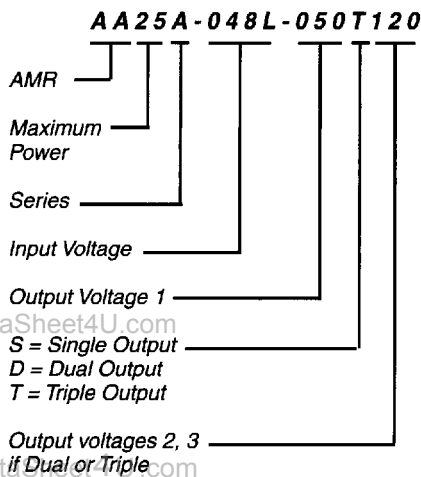
Operating Temperature: -40° to 85°C
(no derating)

Storage Temperature: -25° to 105°C

SAFETY

UL UL1950
CSA CSA22.2-234M90
EN 60950

MODEL SELECTION



SERIES OVERVIEW

The AMR series of high quality DC to DC converters satisfy design applications requiring power levels of 1 to 50 watts. Available in single, dual and triple output models, the AMPSS Micro REGulators (AMRs) feature surface mount construction and incorporate the latest MOSFET designs that allow low parts count resulting in high reliability.

Advanced package design and efficiencies of 80% or greater give the AMRs a wide operating temperature range. Most models feature wide input ranges (4:1), output voltage adjust and TTL compatible On/Off control. Selected models feature a telecom input range with special features to meet ETS300-132-2 paragraph 4.6.

The AMR A and B series models feature industry standard packages, wide input ranges, multiple outputs and low profile six side shielded cases. The AA10B/AA20B models feature a 36 to 75Vdc input range with undervoltage lockout and over temperature shutdown to meet ETS300-132-2. Enhancements to the AMR product line include 3.3V outputs, increased isolation (1500Vdc) and remote inhibit.

AMR C series are low profile, high performance, high power density modules; ideal for 0.75 inch card spacing. Adjustable outputs, overcurrent protection and high efficiency (80% typ) are just some of the C series features. Others include MTBF in excess of 1,000,000 hours, isolated outputs (1500Vdc) and remote inhibit.

The AMR D and E series join the AA13A family of 5V to 3.3V non isolated converters. Designed for cost sensitive applications requiring 3.3V output to drive low voltage logic and the latest microprocessors, these converters feature advanced circuit design and packaging to realize superior performance and reliability.

ORDERING INFORMATION

Model Series	Max Power	Input Range	Output 1	Output 2	Output 3	Dimensions (HxWxL) (inches)	Dimensions (HxWxL) (mm)	Doc. No.**
AA01A	1 W	10.8 - 14.0V	12V @ 0.05A	-12V @ 0.05A	--	0.45x0.5x1.0	11.4x12.7x25.4	1330
AA05A	5W	4.5-5.25 VDC or 9-36 VDC or 20-72 VDC	5V @ 0.75A 12V @ 0.375A 15V @ 0.3A 12V @ 0.185A 15V @ 0.15A	-- -- -- -12V @ 0.185A -15V @ 0.15A	-- -- -- -- --	0.4x1.0x2.0	10.2x25.4x51.0	1332
AA05C	5W	4.5-5.25 VDC or 9-36 VDC or 20-72 VDC	5V @ 1A 12V @ 0.42A 15V @ 0.3A 12V @ 0.21A 15V @ 0.15A	-- -- -- -12 @ 0.21A -15 @ 0.15A	-- -- -- -- --	0.4x1.0x2.0	10.2x25.4x51.0	1218
AA05B	6W	4.5-5.25 VDC or 9-36 VDC or 20-72 VDC	5V @ 1A 12V @ 0.5A 15V @ 0.4A 12V @ 0.25A 15V @ 0.2A	-- -- -- -12 @ 0.25A -15 @ 0.2A	-- -- -- -- --	0.4x1.0x2.0	10.2x25.4x51.0	1351
AA05D	6W	4.5-5.25 VDC or 9-36 VDC or 20-72 VDC	5V @ 1A 12V @ 0.5A 15V @ 0.4A 12V @ 0.25A 15V @ 0.2A	-- -- -- -12 @ 0.25A -15 @ 0.2A	-- -- -- -- --	0.4x1.0x2.0	10.2x25.4x51.0	1219
AA10B & AA10U	10 W	9-36 VDC 18-75 VDC 36-75 VDC	3.3V @ 3.0A 5V @ 2.0A 12V @ .083A 15V @ .067A 5V @ .75A 12V @ 0.375A 15V @ 0.3A	-- -- -- -- -5V @ 0.75A -12 A @ 0.375A -15V @ 0.3A	-- -- -- -- -- -- --	0.4x1.0x2.0	10.2x25.4x51.0	1333
AA13A	13W	4.7V-7 VDC	3.3 V @ 4A	--	--	0.4x1.0x2.0	10.2x25.4x51.0	1801
AA15A	15W	9-36 VDC or 20-72 VDC	5V @ 3A 12V @ 1.25A 15V @ 1A 12V @ 0.625A 15V @ 0.5A 5V @ 1.5A 5V @ 1.5A	-- -- -- -12V @ 0.625A -15V @ 0.5A 12V @ 0.31A 15V @ 0.25A	-- -- -- -- -- -12V @ 0.31A -15V @ 0.25A	0.4x2.0x2.0	10.2x51.0x51.0	1334
AA15B	15W	20-72 VDC	5V @ 3A 12V @ 1.25A 15V @ 1A 12V @ 0.625A 15V @ 0.5A	-- -- -- -12V @ 0.625A -15V @ 0.5A	-- -- -- -- --	0.4x1.6x2.0	10.2x40.6x51.0	1334
AA20B	20W	9-36 VDC or 36-72 VDC or 18-72 VDC	5V @ 4A 12V @ 1.65A 15V @ 1.3A -- --	-- -- -- 12V @ 0.83A 15V @ 0.65A	-- -- -- -12V @ 0.83A -15V @ 0.65A	0.4x1.6x2.0	10.2x40.6x51.0	1335
AA25A	25W	19-36VDC or 36-75VDC	5V @ 5A 15V @ 5A	12V @ 1A 15V @ 0.8A	-12V @ 1A -15V @ 0.8A	0.426x3.0x3.0	10.8x76.0x76.0	1336
AA25B	25W	9-36 VDC or 20-72 VDC	5V @ 5A 12V @ 2A 15V @ 1.6A -- -- 5V @ 3.5A 5V @ 3.5A 5V @ 3.8A 5V @ 3.1A	-- -- -- 12V @ 1A 15V @ 0.8A 12V @ 0.75A 15V @ 0.5A 12V @ 0.25A 15V @ 0.3A	-- -- -- -12V @ 1A -15V @ 0.8A -12V @ 0.75A -15V @ 0.5A -12V @ 0.25VA -15V @ 0.3A	0.83x2.5x3.0	21.0x63.5x76.2	1337
AA25C	25W	36-75 VDC	5V @ 3.8A 5V @ 3.1A	12V @ 0.25A 15V @ 0.3A	-12V @ 0.25VA -15V @ 0.3A	0.4x3.0x3.0	10.2x76.0x76.0	1800
AA25D	25W	4.7-7 VDC	3.3V @ 8A	--	--	0.4x2.0x2.0	10.2x51.0x51.0	1801
AA25E	25W	4.7-7 VDC	3.3V @ 8A	--	--	0.4x2.0x2.0	10.2x51.0x51.0	1802
AA30A	30W	19-35 VDC 35-63 VDC	15V @ 2A 12V @ 2.5A	-- -12V @ 2A	-- --	0.426x3.0x3.0	10.8x76.0x76.0	1338
AA30C	30W	36-75 VDC	36-75VDC	12V @ 2.5A	-12 @ 2A	0.5x3.0x3.0	12.7x76.0x76.0	1803
AA32A	32W	5VDC VRM	3.3V @ 10.0A	--	--	1.0x1.5x3.1	25.4x38.1x78.7	1215
AA40A	40W	19-35 VDC 36-75 VDC	5V @ 8A	--	--	0.426x3.0x3.0	10.8x76.0x76.0	1339
AA40C	40W	36-75 VDC	5V @ 8A 5V @ 4A	-- -5V @ 4A	-- --	0.5x3.0x3.0	12.7x76.0x76.0	1804
AA50A	50W	20-72VDC	3.3V @ 15.0A-- 5V @ 10.0A 12V @ 4.2A 15V @ 3.4A 5V @ 6.0A 5V @ 6A	-- -- -- -- 12V @ 0.75A 15V @ 0.65A	-- -- -- -- -12V @ 0.75A -15V @ 0.65A	0.5x2.6x4.0	12.7x66.0	1352