

Series AM1/4S-Z

0.25 Watt | DC-DC Converter



FEATURES:

- RoHS compliant
- 4 Pin SIP Package
- Low ripple and noise
- High efficiency up to 72%
- Operating temperature -40°C to + 85°C
- Input / Output isolation 1000 and 3000VDC
- Pin compatible with multiple manufacturers



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM1/4S-0503SZ	4.5-5.5	3.3	75.7	1000	100	66
AM1/4S-0505SZ	4.5-5.5	5	50	1000	100	66
AM1/4S-0507SZ	4.5-5.5	7.2	34.72	1000	100	66
AM1/4S-0509SZ	4.5-5.5	9	27.77	1000	100	68
AM1/4S-0512SZ	4.5-5.5	12	20.83	1000	100	68
AM1/4S-0515SZ	4.5-5.5	15	16.67	1000	100	68
AM1/4S-0518SZ	4.5-5.5	18	13.88	1000	100	68
AM1/4S-0524SZ	4.5-5.5	24	10.41	1000	100	70
AM1/4S-1203SZ	10.8-13.2	3.3	75.7	1000	100	66
AM1/4S-1205SZ	10.8-13.2	5	50	1000	100	67
AM1/4S-1207SZ	10.8-13.2	7.2	34.72	1000	100	68
AM1/4S-1209SZ	10.8-13.2	9	27.77	1000	100	68
AM1/4S-1212SZ	10.8-13.2	12	20.83	1000	100	68
AM1/4S-1215SZ	10.8-13.2	15	16.67	1000	100	69
AM1/4S-1218SZ	10.8-13.2	18	13.88	1000	100	70
AM1/4S-1224SZ	10.8-13.2	24	10.41	1000	100	72
AM1/4S-1505SZ	13.5-16.5	5	50	1000	100	70
AM1/4S-2403SZ	21.6-26.4	3.3	75.7	1000	100	67
AM1/4S-2405SZ	21.6-26.4	5	50	1000	100	67
AM1/4S-2407SZ	21.6-26.4	7.2	34.72	1000	100	67
AM1/4S-2409SZ	21.6-26.4	9	27.77	1000	100	69
AM1/4S-2412SZ	21.6-26.4	12	20.83	1000	100	69
AM1/4S-2415SZ	21.6-26.4	15	16.67	1000	100	69
AM1/4S-2418SZ	21.6-26.4	18	13.88	1000	100	69
AM1/4S-2424SZ	21.6-26.4	24	10.41	1000	100	69
AM1/4S-4803SZ	43.2-52.8	3.3	75.7	1000	100	67
AM1/4S-4805SZ	43.2-52.8	5	50	1000	100	67
AM1/4S-4807SZ	43.2-52.8	7.2	34.72	1000	100	67
AM1/4S-4809SZ	43.2-52.8	9	27.77	1000	100	69
AM1/4S-4812SZ	43.2-52.8	12	20.83	1000	100	69
AM1/4S-4815SZ	43.2-52.8	15	16.67	1000	100	69
AM1/4S-4818SZ	43.2-52.8	18	13.88	1000	100	69
AM1/4S-4824SZ	43.2-52.8	24	10.41	1000	100	69
AM1/4S-0503SH30Z	4.5-5.5	3.3	75.7	3000	100	66
AM1/4S-0505SH30Z	4.5-5.5	5	50	3000	100	66
AM1/4S-0507SH30Z	4.5-5.5	7.2	34.72	3000	100	66
AM1/4S-0509SH30Z	4.5-5.5	9	27.77	3000	100	68
AM1/4S-0512SH30Z	4.5-5.5	12	20.83	3000	100	68
AM1/4S-0515SH30Z	4.5-5.5	15	16.67	3000	100	68
AM1/4S-0518SH30Z	4.5-5.5	18	13.88	3000	100	68
AM1/4S-0524SH30Z	4.5-5.5	24	10.41	3000	100	70
AM1/4S-1203SH30Z	10.8-13.2	3.3	75.7	3000	100	66
AM1/4S-1205SH30Z	10.8-13.2	5	50	3000	100	67
AM1/4S-1207SH30Z	10.8-13.2	7.2	34.72	3000	100	68
AM1/4S-1209SH30Z	10.8-13.2	9	27.77	3000	100	68
AM1/4S-1212SH30Z	10.8-13.2	12	20.83	3000	100	68
AM1/4S-1215SH30Z	10.8-13.2	15	16.67	3000	100	69
AM1/4S-1218SH30Z	10.8-13.2	18	13.88	3000	100	70
AM1/4S-1224SH30Z	10.8-13.2	24	10.41	3000	100	72

Models

Single output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
AM1/4S-2403SH30Z	21.6-26.4	3.3	75.7	3000	100	67
AM1/4S-2405SH30Z	21.6-26.4	5	50	3000	100	67
AM1/4S-2407SH30Z	21.6-26.4	7.2	34.72	3000	100	67
AM1/4S-2409SH30Z	21.6-26.4	9	27.77	3000	100	69
AM1/4S-2412SH30Z	21.6-26.4	12	20.83	3000	100	69
AM1/4S-2415SH30Z	21.6-26.4	15	16.67	3000	100	69
AM1/4S-2418SH30Z	21.6-26.4	18	13.88	3000	100	69
AM1/4S-2424SH30Z	21.6-26.4	24	10.41	3000	100	69
AM1/4S-4803SH30Z	43.2-52.8	3.3	75.7	3000	100	67
AM1/4S-4805SH30Z	43.2-52.8	5	50	3000	100	67
AM1/4S-4807SH30Z	43.2-52.8	7.2	34.72	3000	100	67
AM1/4S-4809SH30Z	43.2-52.8	9	27.77	3000	100	69
AM1/4S-4812SH30Z	43.2-52.8	12	20.83	3000	100	69
AM1/4S-4815SH30Z	43.2-52.8	15	16.67	3000	100	69
AM1/4S-4818SH30Z	43.2-52.8	18	13.88	3000	100	69
AM1/4S-4824SH30Z	43.2-52.8	24	10.41	3000	100	69

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-5.5		VDC
	12	10.8-13.2		
	15	13.5 – 16.5		
	24	21.6-26.4		
	48	43.2-52.8		
Filter	Capacitor			
Turn on transient process time			25	ms
Start up time		200		ms
Absolute maximum rating	5 Vin	7		VDC
	12 Vin	15		
	15 Vin	17		
	24 Vin	28		
	48 Vin	54		
Peak input voltage time		100		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1000 and 3000	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±3		%
Short circuit protection	Momentary (1sec)			
Line voltage regulation	For 1% change of Vin	±1.2		% of Vin
Load voltage regulation	Load 20 – 100%	±10		%
Load voltage regulation 3.3V output model	Load 20 – 100%	±20		%
Temperature coefficient		±0.02		%/°C
Ripple & noise	At 20MHz Bandwidth	100		mV p-p
Capacitive load			100	µF
Rising time		50		ms

General Specifications

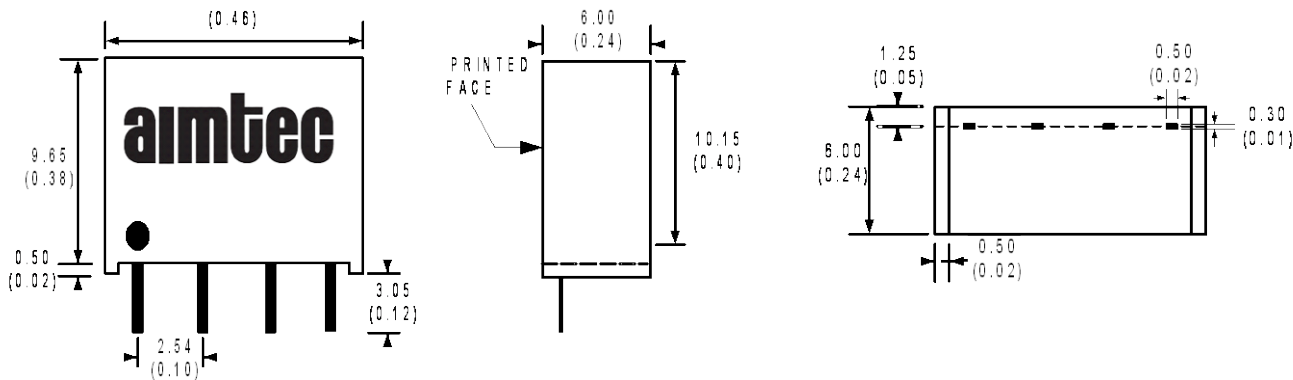
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	80		KHz
Operating temperature	Without derating	-40 to +85		°C
Storage temperature		-40 to +125		°C
Maximum case temperature			100	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Non-conductive black plastic			
Weight		1.5		g
Dimensions (L x W x H)		0.46 x 0.24 x 0.38 inches	11.68 x 6.00 x 9.65 mm	
MTBF		>2 010 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified

Pin Out Specifications

Pin	Single
1	- V Input
2	+V Input
3	- V Output
4	+V Output

Dimensions



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.