



FEATURES:

- RoHS compliant
- Full SMD technology
- Wide 2:1 input range
- High efficiency up to 86%
- Pin compatible with multiple manufacturers
- Operating temperature -40°C to +85°C
- Input/Output Isolation 1500VDC
- Continuous short circuit protection
- Low profile metal package

Models
Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Capacitance load, max (μF)	Efficiency (%)
AM10E-1203SZ	9-18	3.3	2	2200	78
AM10E-1205SZ	9-18	5	2	2200	83
AM10E-1207SZ	9-18	7.2	1.38	1000	82
AM10E-1209SZ	9-18	9	1.111	1000	84
AM10E-1212SZ	9-18	12	0.833	680	85
AM10E-1215SZ	9-18	15	0.666	470	84
AM10E-1218SZ	9-18	18	0.55	470	84
AM10E-1224SZ	9-18	24	0.416	330	85
AM10E-2403SZ	18-36	3.3	2	2200	78
AM10E-2405SZ	18-36	5	2	2200	83
AM10E-2407SZ	18-36	7.2	1.38	1000	83
AM10E-2409SZ	18-36	9	1.111	1000	83
AM10E-2412SZ	18-36	12	0.833	680	85
AM10E-2415SZ	18-36	15	0.666	470	86
AM10E-2418SZ	18-36	18	0.55	470	86
AM10E-2424SZ	18-36	24	0.416	330	86
AM10E-4803SZ	36-72	3.3	2	2200	78
AM10E-4805SZ	36-72	5	2	2200	84
AM10E-4807SZ	36-72	7.2	1.38	1000	84
AM10E-4809SZ	36-72	9	1.111	1000	84
AM10E-4812SZ	36-72	12	0.833	680	86
AM10E-4815SZ	36-72	15	0.666	470	85
AM10E-4818SZ	36-72	18	0.55	470	85
AM10E-4824SZ	36-72	24	0.416	330	85

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Capacitance load, max (μF)	Efficiency (%)
AM10E-0505DZ	4.5-9	±5	±700	±1000	77
AM10E-1203DZ	9-18	±3.3	±1	±1000	78
AM10E-1205DZ	9-18	±5	±1	±1000	83
AM10E-1207DZ	9-18	±7.2	±0.69	±680	80
AM10E-1209DZ	9-18	±9	±0.555	±470	80
AM10E-1212DZ	9-18	±12	±0.416	±470	85
AM10E-1215DZ	9-18	±15	±0.333	±330	85
AM10E-1218DZ	9-18	±18	±0.27	±220	80
AM10E-1224DZ	9-18	±24	±0.208	±220	85
AM10E-2403DZ	18-36	±3.3	±1	±1000	78
AM10E-2405DZ	18-36	±5	±1	±1000	84

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Capacitance load, max (μF)	Efficiency (%)
AM10E-2407DZ	18-36	±7.2	±0.69	±680	80
AM10E-2409DZ	18-36	±9	±0.555	±470	80
AM10E-2412DZ	18-36	±12	±0.416	±470	85
AM10E-2415DZ	18-36	±15	±0.333	±330	86
AM10E-2418DZ	18-36	±18	±0.27	±220	80
AM10E-2424DZ	18-36	±24	±0.208	±220	85
AM10E-4803DZ	36-72	±3.3	±1	±1000	78
AM10E-4805DZ	36-72	±5	±1	±1000	85
AM10E-4807DZ	36-72	±7.2	±0.69	±680	80
AM10E-4809DZ	36-72	±9	±0.555	±470	80
AM10E-4812DZ	36-72	±12	±0.416	±470	86
AM10E-4815DZ	36-72	±15	±0.333	±330	86
AM10E-4818DZ	36-72	±18	±0.27	±220	80
AM10E-4824DZ	36-72	±24	±0.208	±220	85

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.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-9		VDC
	12	9-18		
	24	18-36		
	48	36-72		
Filter	π(PI)			
Turn on Transient process time			350	ms
Start up time		20		ms
Absolute Maximum Rating	5 Vin	-0.7-15		VDC
	12 Vin	-0.7-24		
	24 Vin	-0.7-40		
	48 Vin	-0.7-80		
Peak Input Voltage time			100	ms
No Load Input Current		70		mA
Input reflected current		35		mAp-p

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		500		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance (Dual Output)	Balance Load	±1		%
Cross Regulation (Dual Output)	25% load on one output - 100% load on second load	±5		%
Short Circuit protection	Continuous			

Output Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Short circuit restart		Auto Recovery		
Over load protection		140		%
Line voltage regulation (Single)	HL-LL	±0.5		%
Line voltage regulation (Dual)	HL-LL	±0.5		%
Load voltage regulation (Single)	10-100%	±0.5		%
Load voltage regulation (Dual)	10-100%	±1.0		%
Temperature coefficient		±0.02		% °C
Ripple & Noise	20MHz Bandwidth	100		mVp-p
Rising time		10		ms

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	200		KHz
Operating temperature	-5Vin		-40 to +65	°C
	12, 24, 48 Vin		-40 to +85	
Storage temperature		-40 to +125		°C
Maximum case temperature			100	°C
Derating	5Vin		See Graph	
	12, 24, 48 Vin		Not Required	
Cooling		Free air convection		
Humidity			95	%
Case material		Nickel coated copper		
Potting Material		UL94V-0 rated		
Weight		30		g
Dimensions (L x W x H)	Tolerance ±0.5mm	2.00 x 1.00 x 0.40 inches 50.80 x 25.40 x 10.16 mm		
MTBF		5Vin: 1 121 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		
		12, 24, 48 Vin: > 1 121 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)		
Maximum soldering temperature	1.5mm from case max 10 sec		260	°C
Transient recovery time		250		µS
Transient recovery deviation		±3		%

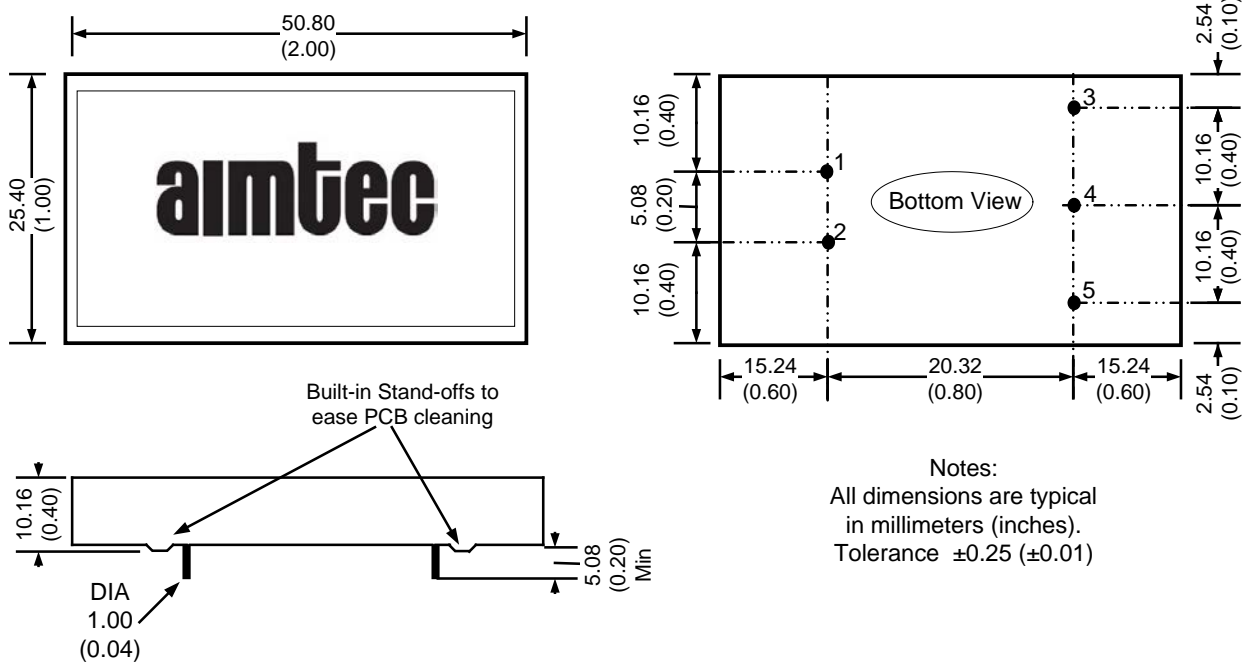
Safety Specifications for models with 12, 24, and 48 Vin

Parameters	
Agency approvals	CE
Standards	EN 55022 (Radiated) – Class A
	EN 55024 – Class A
	IEC61000-4-2
	IEC61000-4-3
	NOTE: Meets IEC60950-1:2001

Pin Out Specifications

Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	No Pin.	Common.
5	-V Output	-V Output

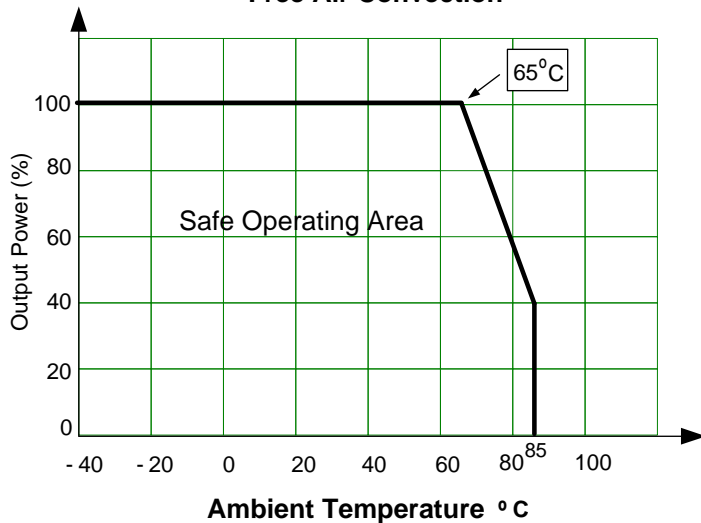
Dimensions



Notes:
All dimensions are typical
in millimeters (inches).
Tolerance ± 0.25 (± 0.01)

Derating - 5Vin Model

Free Air Convection



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