

Series AM3T-RVZ

3 Watt | DC-DC Converter



FEATURES:

- Wide 2:1 Input Range
- 24 Pin DIP Package
- High Efficiency up to 82%
- Metal Package
- Operating Temperature -40°C to +85°C
- Input / Output Isolation 1500 VDC
- Pin Compatible With Multiple Manufacturers
- Continuous Short Circuit Protection



Models

Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Capacitive Load, Max (μF)	Input Current Full No Load (mA)		Efficiency (%)
AM3T-0503S-RVZ	4.5-9	3.3	800	2200	650	70	73
AM3T-0505S-RVZ	4.5-9	5	600	2200	600	70	70
AM3T-0507S-RVZ	4.5-9	7.2	417	1000	417	72	72
AM3T-0509S-RVZ	4.5-9	9	333	470	333	72	72
AM3T-0512S-RVZ	4.5-9	12	250	470	250	74	74
AM3T-0515S-RVZ	4.5-9	15	200	470	200	74	74
AM3T-0518S-RVZ	4.5-9	18	167	220	167	74	74
AM3T-0524S-RVZ	4.5-9	24	125	220	125	70	70
AM3T-1203S-RVZ	9-18	3.3	800	2200	650	70	73
AM3T-1205S-RVZ	9-18	5	600	2200	600	70	76
AM3T-1207S-RVZ	9-18	7.2	417	1000	417	72	74
AM3T-1209S-RVZ	9-18	9	333	470	333	72	77
AM3T-1212S-RVZ	9-18	12	250	470	250	74	79
AM3T-1215S-RVZ	9-18	15	200	470	200	74	79
AM3T-1218S-RVZ	9-18	18	167	220	167	74	79
AM3T-1224S-RVZ	9-18	24	125	220	125	70	79
AM3T-2403S-RVZ	18-36	3.3	800	2200	650	70	70
AM3T-2405S-RVZ	18-36	5	600	2200	600	70	80
AM3T-2407S-RVZ	18-36	7.2	417	1000	417	72	77
AM3T-2409S-RVZ	18-36	9	333	470	333	72	80
AM3T-2412S-RVZ	18-36	12	250	470	250	74	82
AM3T-2415S-RVZ	18-36	15	200	470	200	74	82
AM3T-2418S-RVZ	18-36	18	167	220	167	74	79
AM3T-2424S-RVZ	18-36	24	125	220	125	70	80
AM3T-4803S-RVZ	36-72	3.3	800	2200	650	70	77
AM3T-4805S-RVZ	36-72	5	600	2200	600	70	77
AM3T-4807S-RVZ	36-72	7.2	417	1000	417	72	78
AM3T-4809S-RVZ	36-72	9	333	470	333	72	78
AM3T-4812S-RVZ	36-72	12	250	470	250	74	80
AM3T-4815S-RVZ	36-72	15	200	470	200	74	80
AM3T-4818S-RVZ	36-72	18	167	220	167	74	77
AM3T-4824S-RVZ	36-72	24	125	220	125	70	80

Models

Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Capacitive Load, Max (μF)	Input Current Full No Load (mA)		Efficiency (%)
AM3T-0505D-RVZ	4.5-9	±5	±300	±1000	±300	69	69
AM3T-0507D-RVZ	4.5-9	±7.2	±208	±220	±208	67	67
AM3T-0509D-RVZ	4.5-9	±9	±167	±220	±167	70	70
AM3T-0512D-RVZ	4.5-9	±12	±125	±220	±125	72	72
AM3T-0515D-RVZ	4.5-9	±15	±100	±220	±100	74	74
AM3T-0518D-RVZ	4.5-9	±18	±83	±220	±83	74	74

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Capacitive Load, Max (μF)	Input Current Full No Load (mA)		Efficiency (%)
AM3T-0524D-RVZ	4.5-9	±24	±63	±100	±63	70	70
AM3T-1205D-RVZ	9-18	±5	±300	±1000	±300	69	76
AM3T-1207D-RVZ	9-18	±7.2	±208	±220	±208	67	77
AM3T-1209D-RVZ	9-18	±9	±167	±220	±167	70	77
AM3T-1212D-RVZ	9-18	±12	±125	±220	±125	72	79
AM3T-1215D-RVZ	9-18	±15	±100	±220	±100	74	79
AM3T-1218D-RVZ	9-18	±18	±83	±220	±83	74	78
AM3T-1224D-RVZ	9-18	±24	±63	±100	±63	70	79
AM3T-2405D-RVZ	18-36	±5	±300	±1000	±300	69	80
AM3T-2407D-RVZ	18-36	±7.2	±208	±220	±208	67	78
AM3T-2409D-RVZ	18-36	±9	±167	±220	±167	70	80
AM3T-2412D-RVZ	18-36	±12	±125	±220	±125	72	82
AM3T-2415D-RVZ	18-36	±15	±100	±220	±100	74	82
AM3T-2418D-RVZ	18-36	±18	±83	±220	±83	74	80
AM3T-2424D-RVZ	18-36	±24	±63	±100	±63	70	80
AM3T-4805D-RVZ	36-72	±5	±300	±1000	±300	69	78
AM3T-4807D-RVZ	36-72	±7.2	±208	±220	±208	67	78
AM3T-4809D-RVZ	36-72	±9	±167	±220	±167	70	79
AM3T-4812D-RVZ	36-72	±12	±125	±220	±125	72	80
AM3T-4815D-RVZ	36-72	±15	±100	±220	±100	74	80
AM3T-4818D-RVZ	36-72	±18	±83	±220	±83	74	78
AM3T-4824D-RVZ	36-72	±24	±63	±100	±63	70	80

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) Network			
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		15		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		1500	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Voltage balance	Balanced Load	±1		%
Short circuit protection	Continuous			
Short circuit restart	Auto Recovery			
Line voltage regulation		±0.5		%
Load voltage regulation		±0.5		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise*	At 20MHz Bandwidth	60		mV p-p

* In order to achieve ripple and noise specification, a 100µF capacitor is required to be connected to the output of the converter

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100-400		KHz
Operating temperature	Full Load (see derating chart)	-40 to +85		°C
Storage temperature		-40 to +125		°C
Max Case temperature			100	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Nickel coated copper			
Weight		12.16		g
Dimensions (L x W x H)	Tolerance ±0.5 mm or ±0.02 inches	1.25 x 0.8 x 0.4 inches	31.75 x 20.32 x 10.16 mm	
MTBF	>1,000,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

Safety Specifications

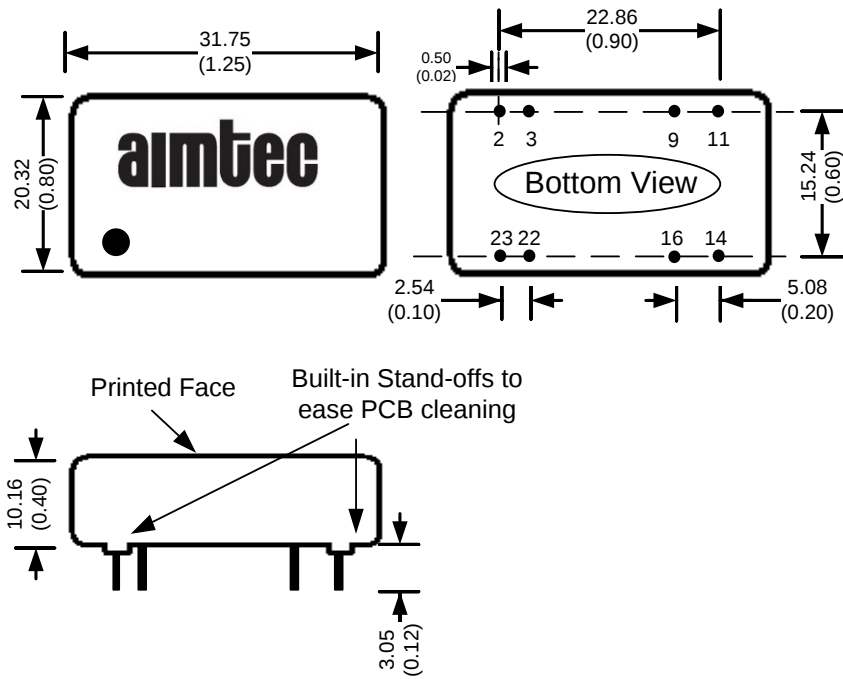
Parameters	
Standards	Designed to meet IEC 60950-1

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.

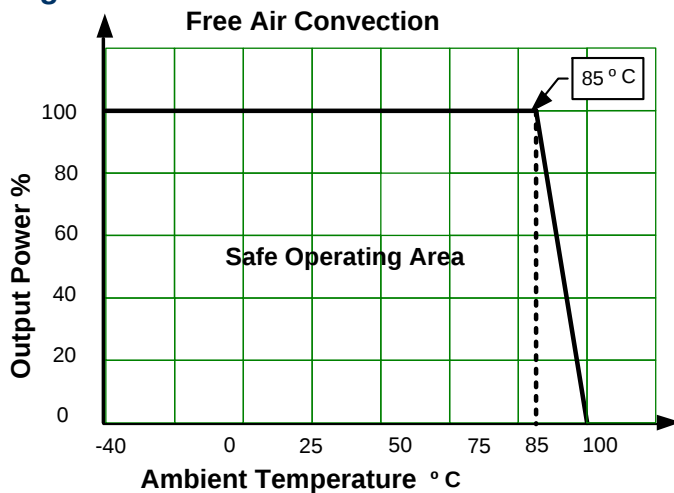
Pin Out Specifications

Pin	1500 VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

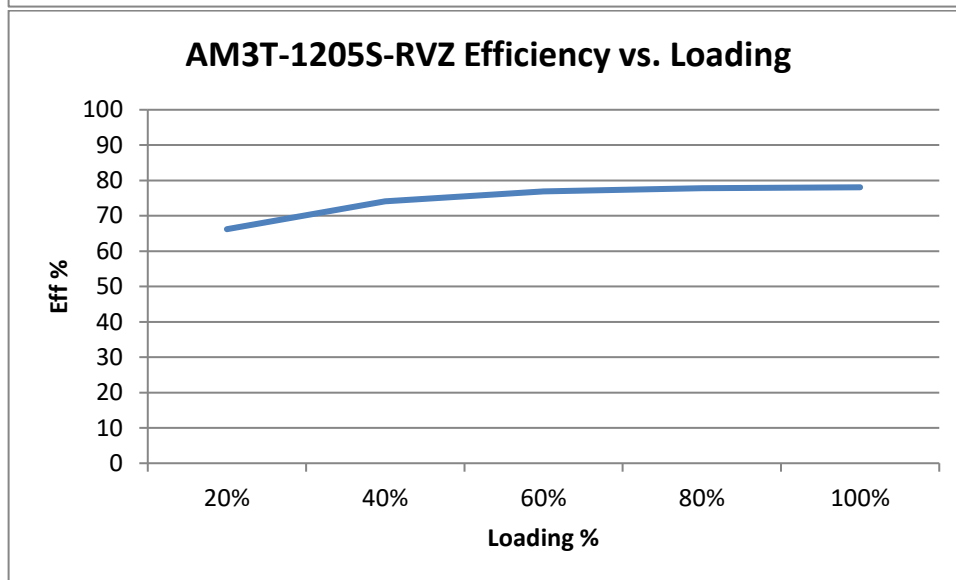
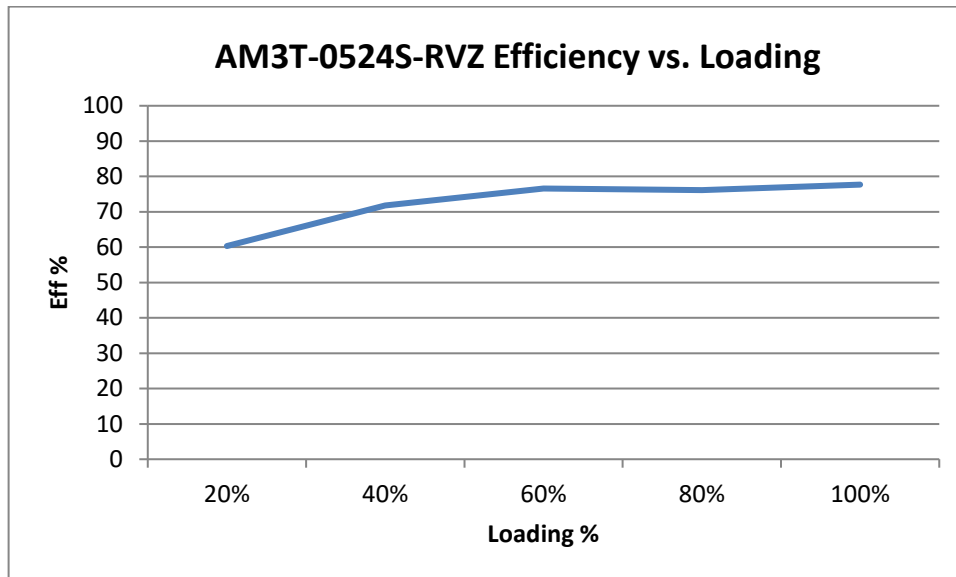
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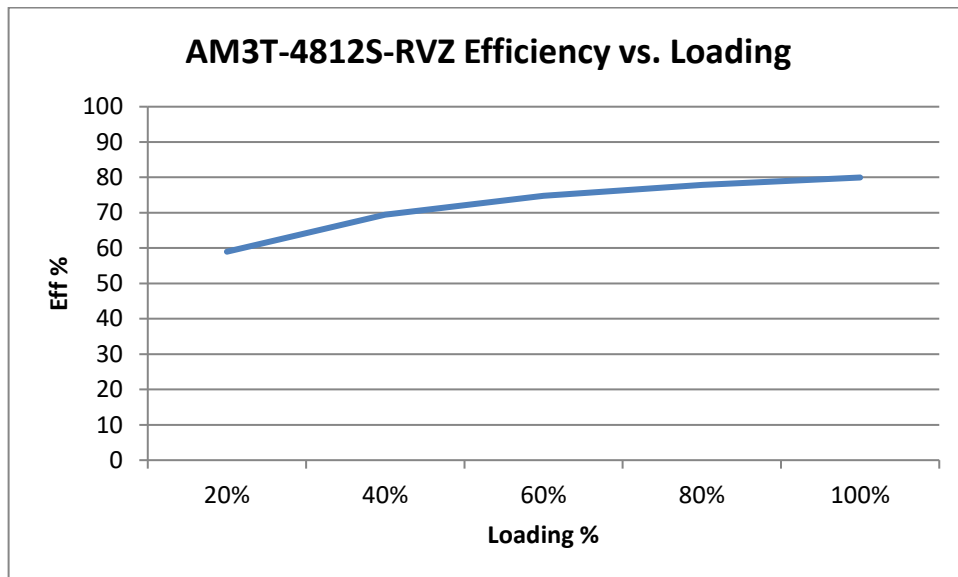
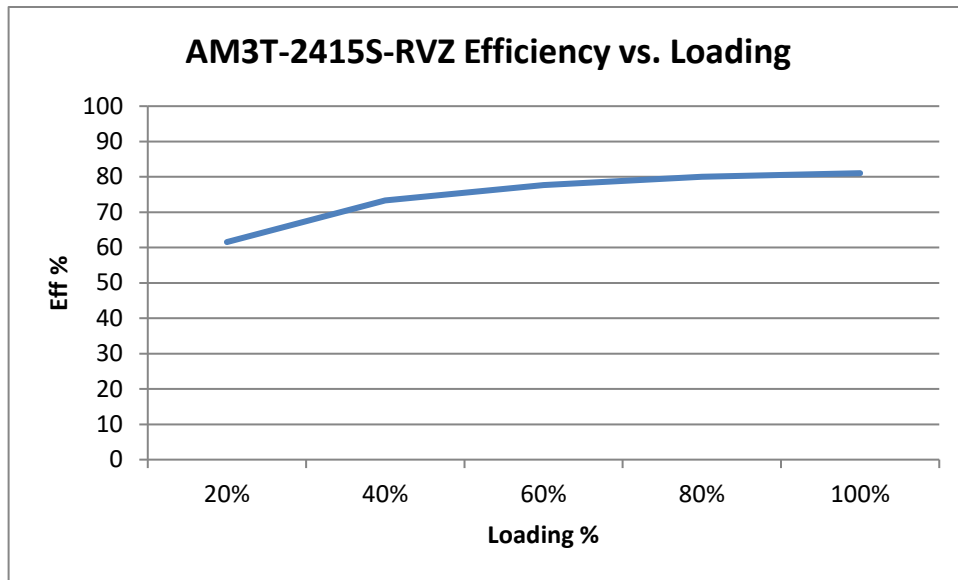


Derating



Typical Efficiency Chart Examples





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