aimtec
Your Power Partner

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 -40ºC to +85ºC
- Input / Output Isolation 1500 VDC
- Pin Compatible With Multiple Manufacturers
- Continuous Short Circuit Protection

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Capacitive Load, Max (µF)	Input Current Full typ. | No Load max. (mA)		Efficiency (%)
AM3T-0505S-RVZ	4.5-9	5	600	2200	857	40	70
AM3T-0507S-RVZ	4.5-9	7.2	417	1000	833	40	72
AM3T-0509S-RVZ	4.5-9	9	333	470	833	40	72
AM3T-0512S-RVZ	4.5-9	12	250	470	810	40	74
AM3T-0515S-RVZ	4.5-9	15	200	470	810	40	74
AM3T-0518S-RVZ	4.5-9	18	167	220	810	40	74
AM3T-0524S-RVZ	4.5-9	24	125	220	857	40	70
AM3T-1205S-RVZ	9-18	5	600	2200	328	20	76
AM3T-1207S-RVZ	9-18	7.2	417	1000	328	20	74
AM3T-1209S-RVZ	9-18	9	333	470	324	20	77
AM3T-1212S-RVZ	9-18	12	250	470	316	20	79
AM3T-1215S-RVZ	9-18	15	200	470	316	20	79
AM3T-1218S-RVZ	9-18	18	167	220	316	20	79
AM3T-1224S-RVZ	9-18	24	125	220	316	20	79
AM3T-2405S-RVZ	18-36	5	600	2200	156	12	80
AM3T-2407S-RVZ	18-36	7.2	417	1000	162	12	77
AM3T-2409S-RVZ	18-36	9	333	470	156	12	80
AM3T-2412S-RVZ	18-36	12	250	470	152	12	82
AM3T-2415S-RVZ	18-36	15	200	470	152	12	82
AM3T-2418S-RVZ	18-36	18	167	220	158	12	79
AM3T-2424S-RVZ	18-36	24	125	220	156	12	80
AM3T-4805S-RVZ	36-72	5	600	2200	81	8	77
AM3T-4807S-RVZ	36-72	7.2	417	1000	80	8	78
AM3T-4809S-RVZ	36-72	9	333	470	80	8	78
AM3T-4812S-RVZ	36-72	12	250	470	78	8	80
AM3T-4815S-RVZ	36-72	15	200	470	78	8	80
AM3T-4818S-RVZ	36-72	18	167	220	81	8	77
AM3T-4824S-RVZ	36-72	24	125	220	78	8	80

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Capacitive Load, Max (µF)	Input Current Full typ. | No Load max. (mA)		Efficiency (%)
AM3T-0505D-RVZ	4.5-9	±5	±300	±1000	869	40	69
AM3T-0507D-RVZ	4.5-9	±7.2	±208	±220	896	40	67
AM3T-0509D-RVZ	4.5-9	±9	±167	±220	857	40	70
AM3T-0512D-RVZ	4.5-9	±12	±125	±220	833	40	72
AM3T-0515D-RVZ	4.5-9	±15	±100	±220	810	40	74
AM3T-0518D-RVZ	4.5-9	±18	±83	±220	810	40	74
AM3T-0524D-RVZ	4.5-9	±24	±63	±100	857	40	70

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (mA)	Capacitive Load, Max (µF)	Input Current Full typ. | No Load max. (mA)		Efficiency (%)
AM3T-1205D-RVZ	9-18	±5	±300	±1000	329	20	76
AM3T-1207D-RVZ	9-18	±7.2	±208	±220	325	20	77
AM3T-1209D-RVZ	9-18	±9	±167	±220	325	20	77
AM3T-1212D-RVZ	9-18	±12	±125	±220	316	20	79
AM3T-1215D-RVZ	9-18	±15	±100	±220	316	20	79
AM3T-1218D-RVZ	9-18	±18	±83	±220	321	20	78
AM3T-1224D-RVZ	9-18	±24	±63	±100	316	20	79
AM3T-2405D-RVZ	18-36	±5	±300	±1000	156	12	80
AM3T-2407D-RVZ	18-36	±7.2	±208	±220	160	12	78
AM3T-2409D-RVZ	18-36	±9	±167	±220	158	12	80
AM3T-2412D-RVZ	18-36	±12	±125	±220	152	12	82
AM3T-2415D-RVZ	18-36	±15	±100	±220	152	12	82
AM3T-2418D-RVZ	18-36	±18	±83	±220	156	12	80
AM3T-2424D-RVZ	18-36	±24	±63	±100	156	12	80
AM3T-4805D-RVZ	36-72	±5	±300	±1000	80	8	78
AM3T-4807D-RVZ	36-72	±7.2	±208	±220	80	8	78
AM3T-4809D-RVZ	36-72	±9	±167	±220	79	8	79
AM3T-4812D-RVZ	36-72	±12	±125	±220	78	8	80
AM3T-4815D-RVZ	36-72	±15	±100	±220	78	8	80
AM3T-4818D-RVZ	36-72	±18	±83	±220	80	8	78
AM3T-4824D-RVZ	36-72	±24	±63	±100	78	8	80

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	5	4.5-9		VDC
	12	9-18		VDC
	24	18-36		VDC
	48	36-72		VDC
Filter	π (Pi) Network			
Absolute Maximum Rating	5 Vin	-0.7-15		VDC
	12 Vin	-0.7-24		VDC
	24 Vin	-0.7-40		VDC
	48 Vin	-0.7-80		VDC
Peak Input Voltage time		100		ms
Input Reflected Ripple Current *		35		mA p-p

* The input reflected ripple current should be measured with a 12µH inductor.

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	%
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
Minimum load current *		25		%

* Operating the converter below the minimum load current will not damage the converter. However, some of the specifications may not be meet.

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		17		g
Dimensions (L x W x H)	1.25 x 0.8 x 0.4 inches 31.75 x 20.32 x 10.2 mm			
MTBF	>1,000,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			

Safety Specifications

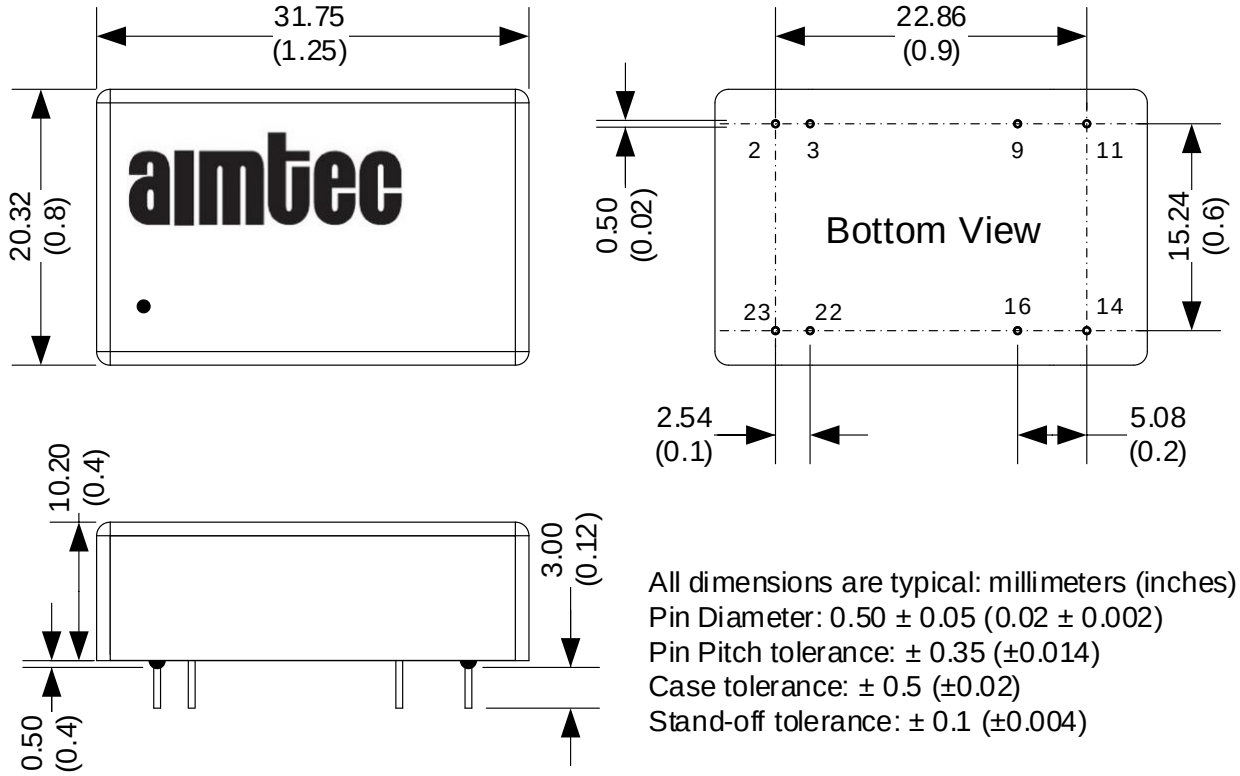
Parameters	
Standards	Designed to meet IEC 60950-1

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

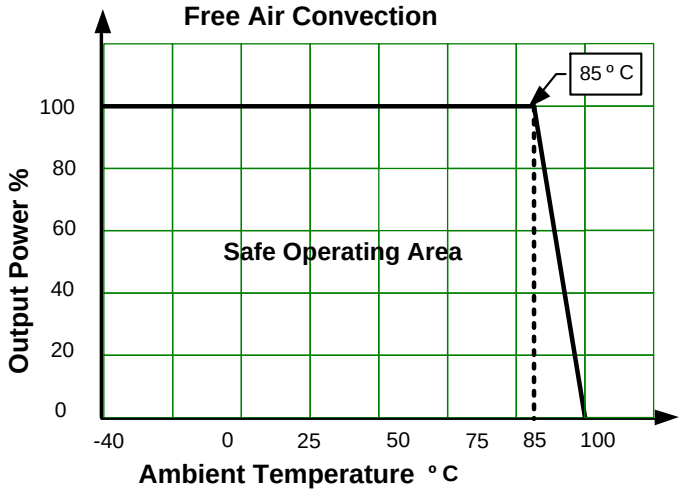
Pin	1500 VDC	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	No pin	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

Dimensions

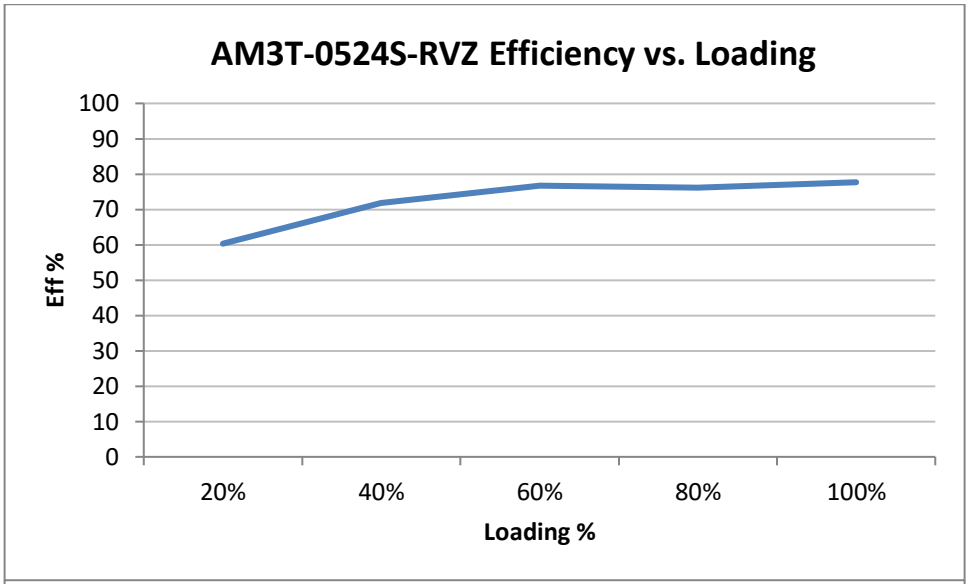


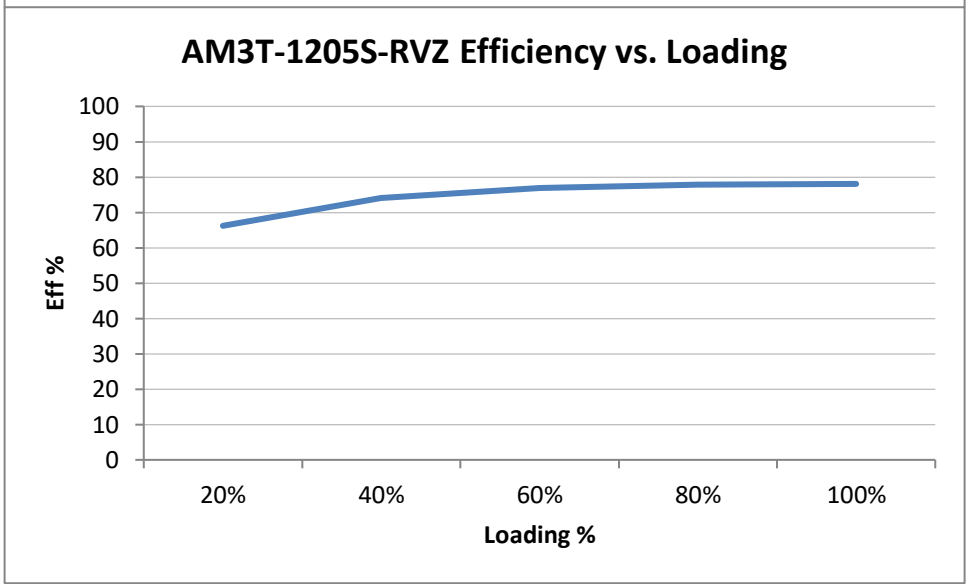
All dimensions are typical: millimeters (inches)
Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
Pin Pitch tolerance: ± 0.35 (±0.014)
Case tolerance: ± 0.5 (±0.02)
Stand-off tolerance: ± 0.1 (±0.004)

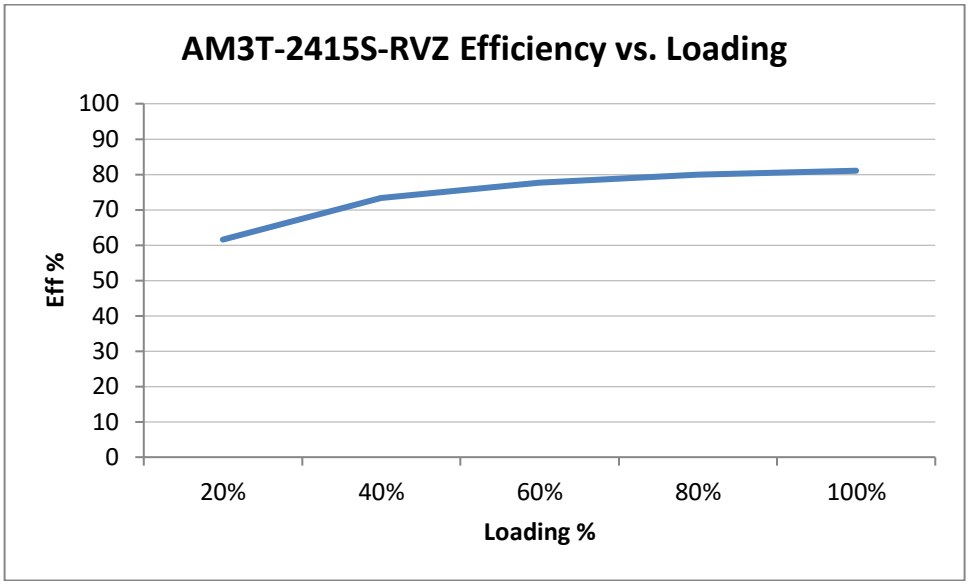
Derating

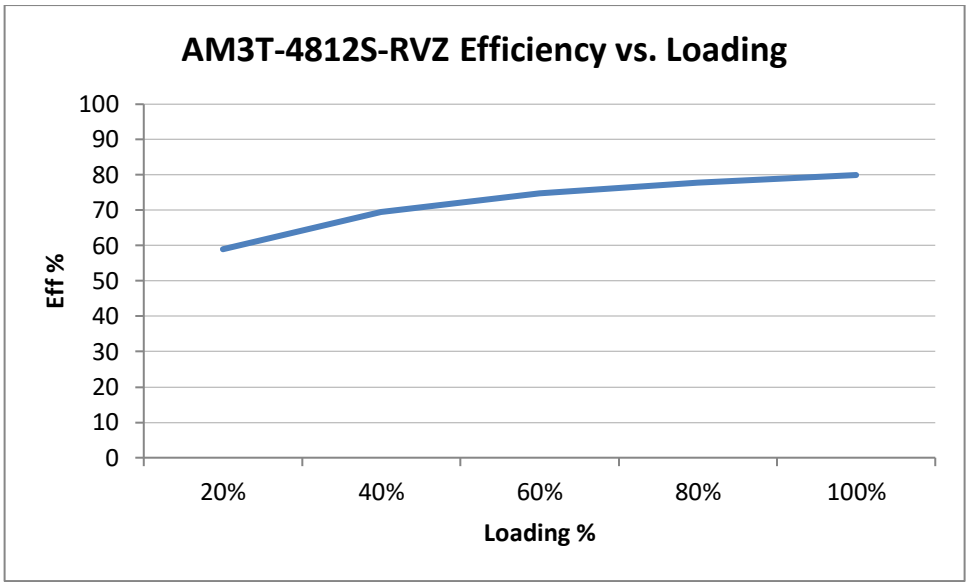


Typical Efficiency Chart Examples









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