aimtec
Your Power Partner

Series AM15CW-FZ

15Watt | DC-DC Converter

FEATURES:

- Ultra Compact Footprint 1”x1”
- Ultra-Wide Input Range 4:1
- 1500 VDC Isolation
- Remote ON / OFF Function
- Output Short Circuit Protection
- Operating Temperature -40ºC to +85ºC
- Over Voltage, Over Load Protection
- Efficiency up to 89%

RoHS

Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (A)	Isolation (VDC)	Input Current Full | No Load (mA)		Max Capacitive Load (uF)	Efficiency (%)
AM15CW-2403S-FZ	9-36	3.3	4	1500	671	59	12000	86
AM15CW-2405S-FZ	9-36	5	3	1500	744	53	6000	88
AM15CW-2412S-FZ	9-36	12	1.3	1500	783	56	2000	87
AM15CW-2415S-FZ	9-36	15	1	1500	753	59	1200	87
AM15CW-4803S-FZ	18-75	3.3	4	1500	335	27	12000	86
AM15CW-4805S-FZ	18-75	5	3	1500	368	24	6000	89
AM15CW-4812S-FZ	18-75	12	1.3	1500	382	28	2000	89
AM15CW-4815S-FZ	18-75	15	1	1500	368	29	1200	89

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current Max (A)	Isolation (VDC)	Input Current Full | No Load (mA)		Max Capacitive Load (uF)	Efficiency (%)
AM15CW-2405D-FZ	9-36	±5	±1.5	1500	772	49	±3000	85
AM15CW-2412D-FZ	9-36	±12	±0.625	1500	753	58	±1000	87
AM15CW-2415D-FZ	9-36	±15	±0.5	1500	753	60	±600	87
AM15CW-4805D-FZ	18-75	±5	±1.5	1500	386	23	±3000	85
AM15CW-4812D-FZ	18-75	±12	±0.625	1500	372	28	±1000	88
AM15CW-4815D-FZ	18-75	±15	±0.5	1500	368	30	±600	89

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	24 48	9-36 18-75		VDC
Filter		π		
Start up time	Nominal Vin with constant resistive load	72		ms
Absolute Maximum Rating	24 Vin 48 Vin		50 100	VDC
Peak Input Voltage time			100	ms
On/Off control	ON 3.5 to 12VDC (or open) ; OFF 0 to 0.7 VDC or short to Vin pin 2 On source current <0.2mA, OFF idle current – <12mA			
Under voltage lockout	24 Vin ON/OFF 48Vin ON/OFF	8.5 /7 17/15		VDC
Input reflected ripple current		60		mA p-p

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1500	VDC
Resistance		>1000		MOhm
Capacitance		550		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±1		%
Over voltage protection	Zener Diode Clamp	120		%
Over load protection	% of Full Load at Nominal Input	110		%
Short Circuit protection		Continuous		
Short circuit restart		Auto-Recovery		
Line voltage regulation	HL-LL	±1.0		%
Load voltage regulation (Single)	25% to 100% load	±1.0		%
Load voltage regulation (Dual)	balanced load Unbalanced 25% to 100%	±0.5 ±5.0		%
Temperature coefficient		±0.02		%/°C
Ripple & Noise	20MHz Bandwidth	80		mV p-p
Voltage adjustment range	Trim - Single output models only	10		%
Transient recovery time	Load step change 50%	560		µS
Transient recovery deviation	di/dt = 0.8A/µsec 3.3V models	±5 ±6		%of Vo

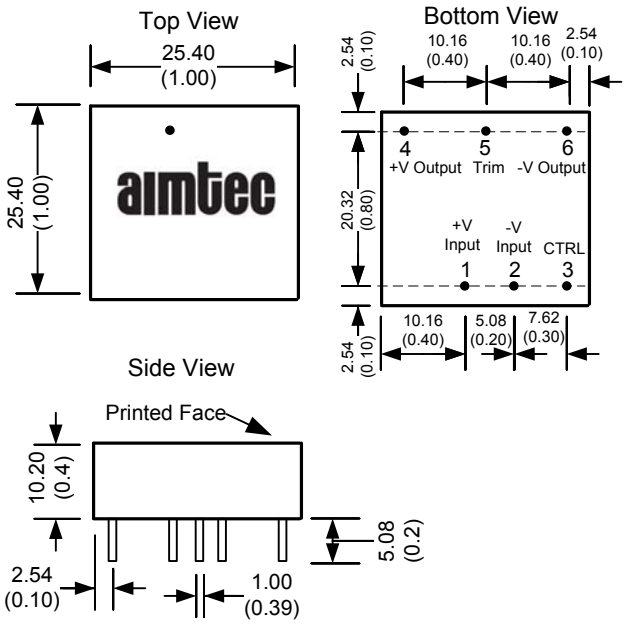
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	330		KHz
Operating temperature	With derating above +63°C	-40 to +85		°C
Storage temperature	-55 to +125			°C
Maximum case temperature			105	°C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Nickel-coated copper			
Potting Material	Silicon Rubber (UL94V-0)			
Weight	19.2			g
Dimensions (L x W x H)	1.00 x 1.00 x 0.40 inches 25.40 x 25.40 x 10.20 mm			
MTBF	> 1,580,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	1.5mm from case for 10 sec		260	°C

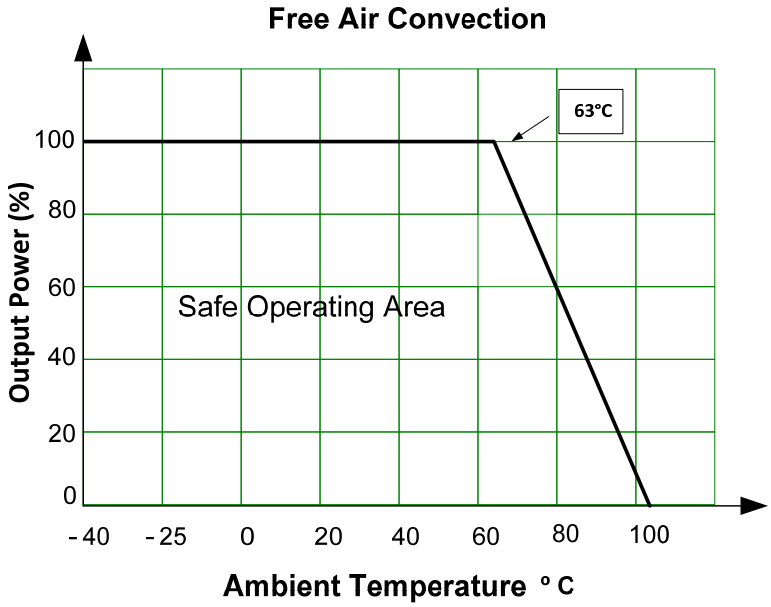
Pin Out Specifications

Pin	Single	Dual
1	+ V input	+ V input
2	- V input	- V input
3	On/Off Control	On/Off Control
4	+ V output	+ V output
5	Trim	Common
6	- V output	- V output

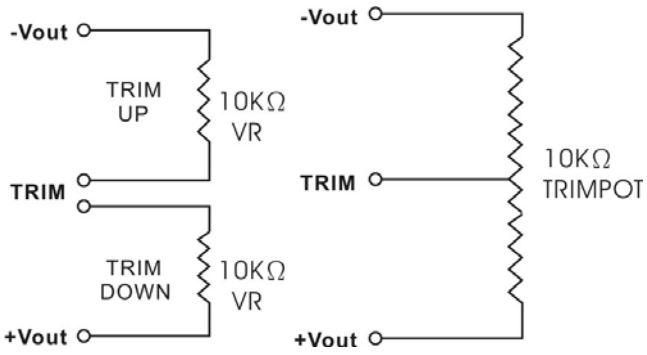
Dimensions



Derating



Trimming



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