

Series AM20CW-FZ

20Watt | DC-DC Converter



FEATURES:

- Ultra Compact Footprint 1"x1"
- Ultra-Wide Input Range 4:1
- Soft start feature
- Remote ON / OFF Function
- Output Short Circuit Protection
- Operating Temperature -40°C to +85°C
- Over Voltage, Over Load Protection
- Efficiency up to 91%



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 (%)
AM20CW-2403S-FZ-K	9-36	3.3	4.5	1500	755	63	24700	86
AM20CW-2405S-FZ-K	9-36	5	4	1500	992	63	14700	88
AM20CW-2412S-FZ-K	9-36	12	1.67	1500	970	83	4700	90
AM20CW-2415S-FZ-K	9-36	15	1.33	1500	967	70	2200	90
AM20CW-4803S-FZ-K	18-75	3.3	4.5	1500	373	29	32200	87
AM20CW-4805S-FZ-K	18-75	5	4	1500	490	30	23300	89
AM20CW-4812S-FZ-K	18-75	12	1.67	1500	486	38	3300	90
AM20CW-4815S-FZ-K	18-75	15	1.33	1500	477	32	1000	91

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 (%)
AM20CW-2405D-FZ-K	9-36	±5	±2	1500	990	59	±7000	86
AM20CW-2412D-FZ-K	9-36	±12	±0.833	1500	992	60	±2200	88
AM20CW-2415D-FZ-K	9-36	±15	±0.667	1500	981	83	±1000	89
AM20CW-4805D-FZ-K	18-75	±5	±2	1500	490	35	±7000	86
AM20CW-4812D-FZ-K	18-75	±12	±0.833	1500	490	35	±680	89
AM20CW-4815D-FZ-K	18-75	±15	±0.667	1500	490	35	±470	88

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		76	ms
Absolute Maximum Rating	24 Vin 48 Vin		50 100	VDC
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			
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		450		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	±0.5		%
	Unbalanced 25% to 100%	±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%	700		µS
Transient Recovery Deviation	Others	±5		%of Vo
	3.3V models	±6		

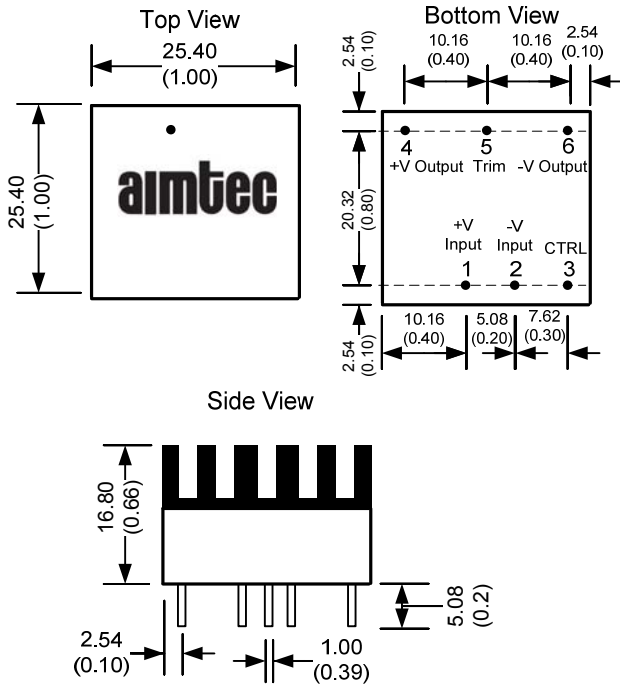
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching Frequency	100% load	330		KHz
Operating Temperature	With derating above +60°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	23.4			g
Dimensions (L X W X H)	1.00 x 1.00 x 0.66 inches	25.40 x 25.40 x 16.80 mm		
MTBF	> 350,000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum Soldering Temperature	1.5mm from case for 10 sec		260	°C

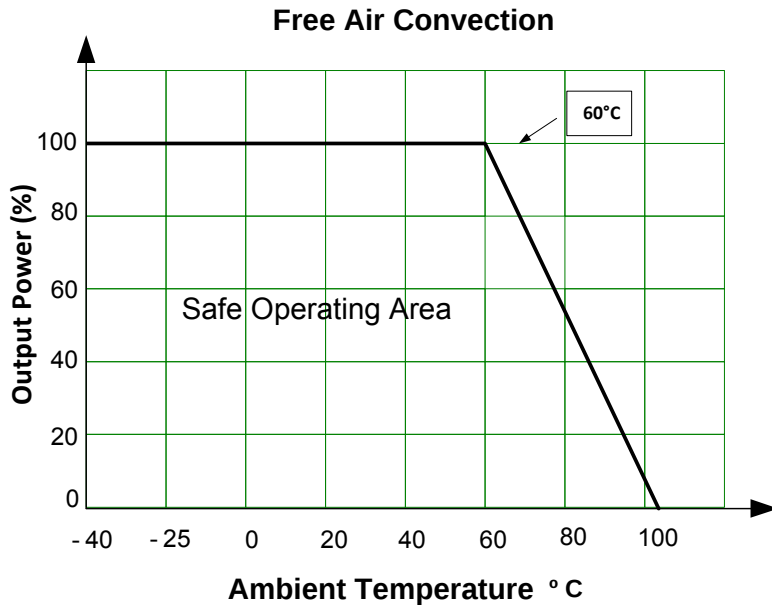
Pin Out Specifications

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

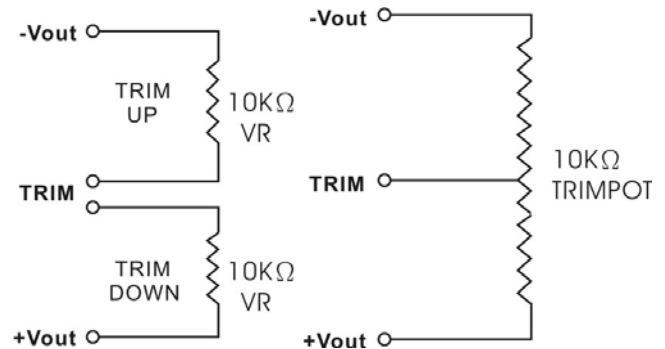
Dimensions



Derating



Trimming



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