



FEATURES:

- I/O Isolation of 3,000VDC
- Efficiency up to 85%
- 2:1 Wide Input Voltage Range
- Industry Standard Pin-out
- IGBT dedicated DC-DC converter
- Operating temperature range: -40 to +85°C
- Continuous short circuit protection
- Output Over-Voltage Protection

Models
Dual output



Model	Input Voltage (V)	Input current FL (mA)	Output Voltage (V)	Max Output Current (mA)	Min Output Current (mA)	Max Capacitive Load (uF)	Efficiency (%)
AM5TG-121509DH30-NZ	7-18	471	+15 / -9	±200	±10	680	83
AM5TG-241509DH30-NZ	18-36	235	+15 / -9	±200	±10	1000	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	12V Input	7-18	20	VDC
	24V Input	18-36	50	VDC
Filter	Capacitor			
No Load Input Current	12V Input		30	mA
	24V Input		8	mA

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60sec, <1mA		3000	VDC
Resistance		>1000		MOhm
Capacitance	100KHz/0.1V	12V Input	50	pF
		24V Input	100	

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Supplement Output (-9V output)	12V Input	±5	±10
		24V Input	±1	±2
	Full load, LL – HL	12V Input	±5	±10
		24V Input	±3	±5
Short Circuit protection	Continuous, auto restart			
Line voltage regulation	LL – HL	12V Input	±5	±10
		24V Input	±0.2	±0.5
Load voltage regulation	5 – 100% load	12V Input	±5	±10
		24V Input	±0.5	±1
Temperature coefficient	Full load		±0.03	%/°C
Ripple & Noise	20MHz Bandwidth	100	200	mV p-p
Over voltage protection		120	140	% Vo

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	12V Input	380	kHz
		24V Input	300	
Operating temperature	See derating graph	12V Input	-40 to +105	°C
		24V Input	-40 to +85	
Storage temperature		-55 to +125		°C
Case temperature Rise	Ta = 25 °C		40	°C

General Specifications (Continued)

Parameters	Conditions	Typical	Maximum	Units
Cooling	Free air convection			
Humidity			95	% RH
Case material	Non-conductive black plastic (UL94V-0 rated)			
Weight	14			g
Dimensions (L x W x H)	1.244 x 0.799 x 0.402 inches	31.60 x 20.30 x 10.20 mm		
MTBF	>1,000,000hrs (MIL-HDBK -217F, Ground Benign, t=+25 °C)			
Maximum soldering temperature	1.5 mm from case for 10sec		300	°C

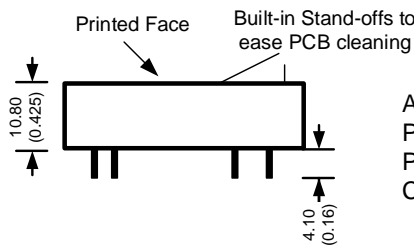
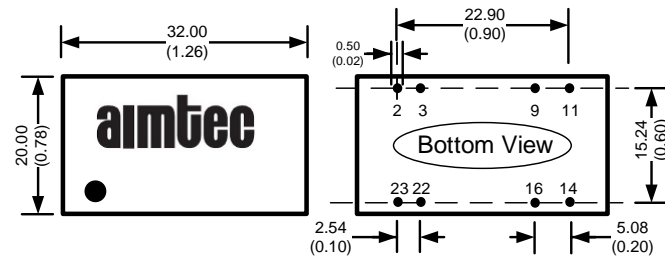
Safety Specifications

Parameters			
Standards	EMI - Conducted and radiated emission	12V Input	EN55025/CISPR25, Class 3 (with the recommended EMC circuit)
		24V Input	EN55022, Class A (with the recommended EMC circuit)
	Electrostatic Discharge Immunity	IEC 61000-4-2, Contact +/-4kV, Criteria B	
	RF, Electromagnetic Field Immunity	IEC 61000-4-3, 10V/m, Criteria A	
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4, +/-2kV, Criteria B, (with the recommended EMC circuit)	
	Surge Immunity	IEC 61000-4-5, L-L +/-2kV, Criteria B, (with the recommended EMC circuit)	
	RF, Conducted Disturbance Immunity	IEC 61000-4-6, 3Vrms, Criteria A	
	Immunity of Short interruption	IEC 61000-4-29, 0%-70%, Criteria B	

Pin Out Specifications

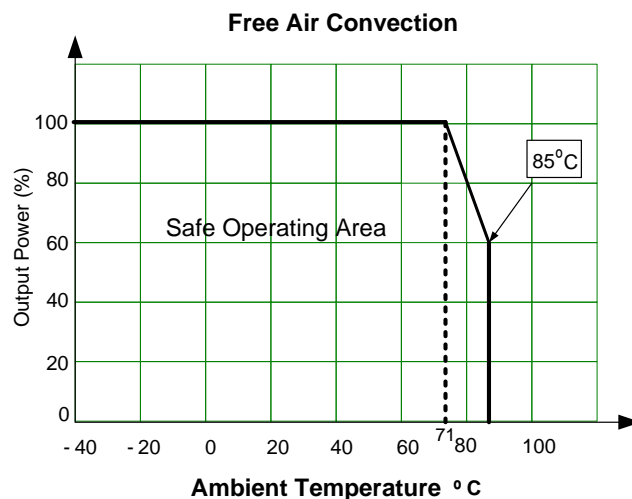
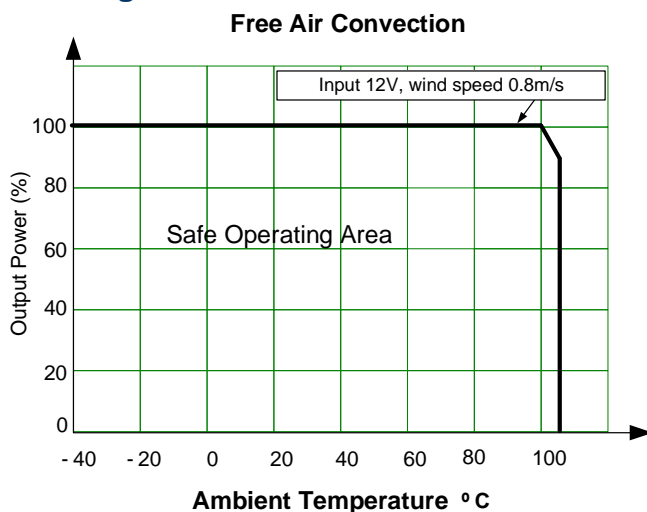
Pin	Dual
2	-Vin
3	-Vin
9	Common
11	- V Output
14	+ V Output
16	Common
22	+Vin
23	+Vin

Dimensions



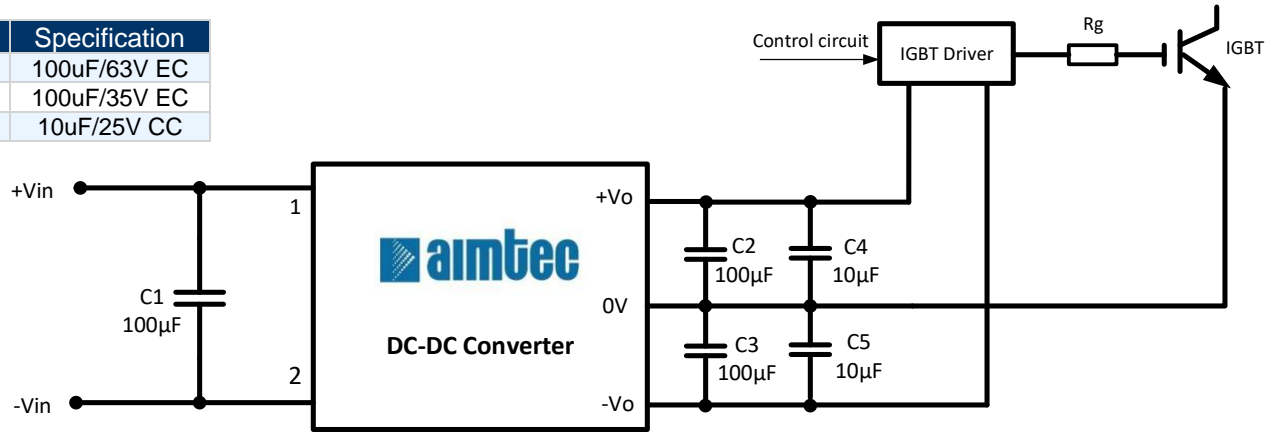
All dimensions are typical: millimeters (inches)
 Pin Diameter: 0.50 ± 0.05 (0.02 ± 0.002)
 Pin Pitch Tolerance: ± 0.35 (±0.014)
 Case Tolerance: ± 0.5 (±0.02)

Derating



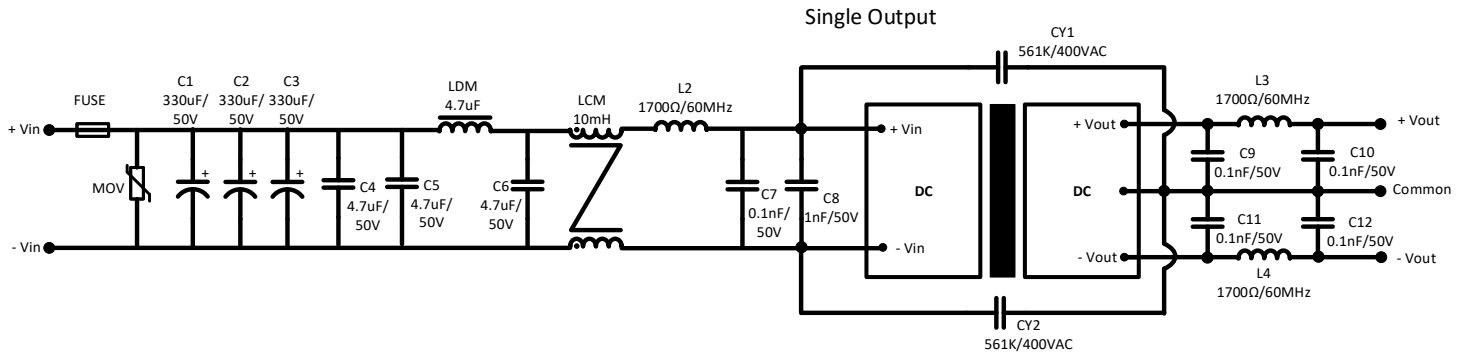
Application Circuit

	Specification
C1	100uF/63V EC
C2,C3	100uF/35V EC
C4,C5	10uF/25V CC

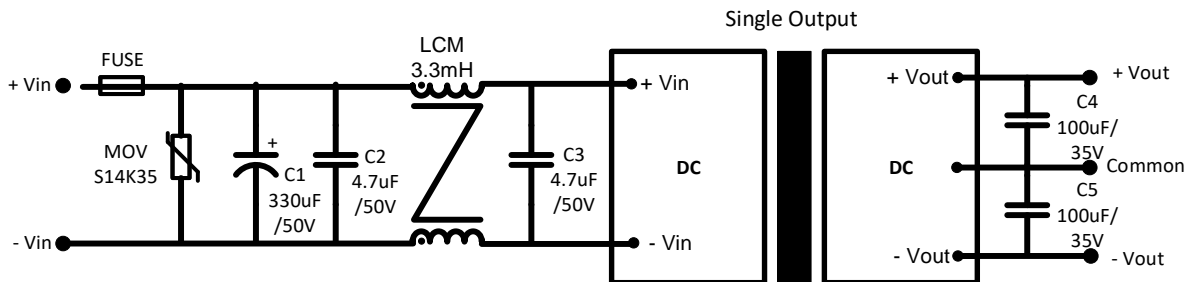


EMI Recommended Circuit (Class A)

12V models



24V models



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