

FEATURES:

- I/O Isolation of 3000VAC or 3500VAC/6000VDC
- Maximum Capacitive load up to 1000µF
- Operating temperature: -40 to +105°C
- Efficiency up to 83%
- SIP7 Package
- Ultra-low Isolation capacitance

Models
Dual output



Model	Input Voltage (V)	Input current FL/NL (mA)	Output Voltage (V)	Output Current max (mA)	Max Capacitive Load (uF)	Efficiency (%)
AM3DG-121508DH30-NZ	11.4 – 12.6	280 40	+15 (14.25 ~ 15.75) / -8 (-6.4 ~ -9.6)	+120 / -120	1000	81
AM3DG-151508DH30-NZ	14.25 – 15.75	230 35				
AM3DG-241508DH30-NZ	22.8 – 25.2	144 30				
AM3DG-151504DH60-NZ	13.5 – 16.5	151 15	+15 / -4	+100 / -100	220	82
AM3DG-151803DH60-NZ	13.5 – 16.5	177 16	+18 / -3	+100 / -100	220	79
AM3DG-152004DH60-NZ	13.5 – 16.5	196 16	+20 / -4	+100 / -100	220	83

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	See model's table			
Filter	Capacitor			
Absolute Maximum Rating	AM3DG-121508DH30-NZ		-0.7 - 14	VDC
	AM3DG-151508DH30-NZ		-0.7 - 16	
	AM3DG-241508DH30-NZ		-0.7 - 26	
	AM3DG-151504DH60-NZ		-0.7 - 21	
	AM3DG-151803DH60-NZ		-0.7 - 21	
	AM3DG-152004DH60-NZ		-0.7 - 21	
Peak Input Voltage time			100	ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	AM3DG-151504DH60-NZ AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	60sec, <1mA	3500/6000	VAC/VDC
	other models		3000	VAC
Resistance	I/O Isolation 500VDC	>1000		MOhm
Capacitance	AM3DG-151504DH60-NZ AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	100KHz/0.1V	3.5	pF
	other models	100KHz/0.1V	6	

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	AM3DG-151504DH60-NZ	+6 / +10	+10 / +18	%
	AM3DG-151803DH60-NZ	+4 / +12	+9 / +20	
	AM3DG-152004DH60-NZ	+4 / +10	+6 / +15	
	AM3DG-151504DH60-NZ	0 / 0	+2 / +5	%
	AM3DG-151803DH60-NZ	-3 / 0	+2 / +7	
	AM3DG-152004DH60-NZ	-1.5 / +0.5	+1 / +5.5	
	Others	See tolerance curve		

Short Circuit protection	AM3DG-151504DH60-NZ AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	Continuous, auto restart			
	Others		1	s	
Line voltage regulation	AM3DG-151504DH60-NZ, HL-LL AM3DG-151803DH60-NZ, HL-LL AM3DG-152004DH60-NZ, HL-LL	±1.1	±1.3	%	
	Others, HL-LL, +15 Vout		±5		
	Others, HL-LL, -8 Vout		±20		
Load voltage regulation	AM3DG-151504DH60-NZ AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	10 – 100% load, +Vout	5	8	%
			7	9	
			6	10	
	AM3DG-151504DH60-NZ AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	10 – 100% load, -Vout	10	13	%
			10	15	
			12	20	
	10 – 100% load: 20Vdc output		±15	%	
Temperature coefficient	Full load		±0.03	%/°C	
Ripple & Noise	AM3DG-151504DH60-NZ	20MHz Bandwidth	100	mV p-p	
	AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	20MHz Bandwidth			75
	Others, 20MHz Bandwidth		100		200

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	100% load	95	KHz
	Others, 100% load	100		
Operating temperature	Derating above 85°C	-40 to +105		°C
Storage temperature	AM3DG-151504DH60-NZ	-40 to +105		°C
	Others	-55 to +125		
Case temperature rise	AM3DG-151504DH60-NZ AM3DG-151803DH60-NZ AM3DG-152004DH60-NZ	Ta=25°C	30	°C
	Others, Ta=25°C		40	
	Cooling	Free air convection		
Humidity			95	% RH
Case material	Non-conductive black plastic (UL94V-0 rated)			
Weight	4.3			g
Dimensions (L x W x H)	0.77 x 0.39 x 0.49 inches	19.50 x 9.80 x 12.50 mm		
MTBF	>3,500,000hrs (MIL-HDBK -217F, Ground Benign, t=+25°C)			
Maximum soldering temperature	1.5 mm from case for 10sec		300	°C

Safety Specifications

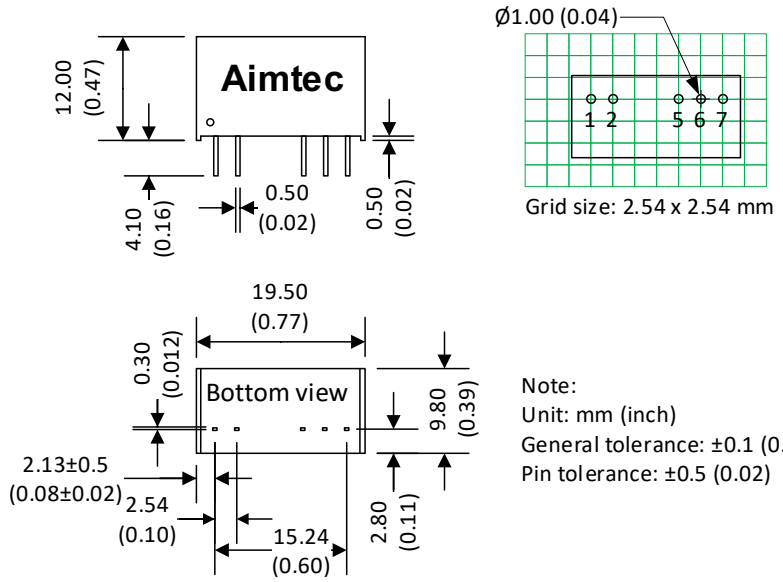
Parameters		
Agency approvals	cULus	
Standards	UL 60950-1 (AM3DG-152004DH60-NZ only) CISPR32/EN 55032 Class B for 6000Vdc(3500VAC) models (see recommended circuit)	
	Electrostatic Discharge Immunity	IEC/EN 61000-4-2, Perf. Criteria B (Contact +/- 6KV for 3500VAC isolation models) (Contact +/- 8KV for 3000VAC isolation models)
	Electrical Fast Transient / Burst Immunity	IEC 61000-4-4, Perf. Criteria B (EFT +/- 2KV), for 3000VAC isolated models only
	Surge Immunity	IEC 61000-4-5, Perf. Criteria B (Surge Input to Output +/- 2KV), for 3000VAC isolated models

Pin Out Specifications

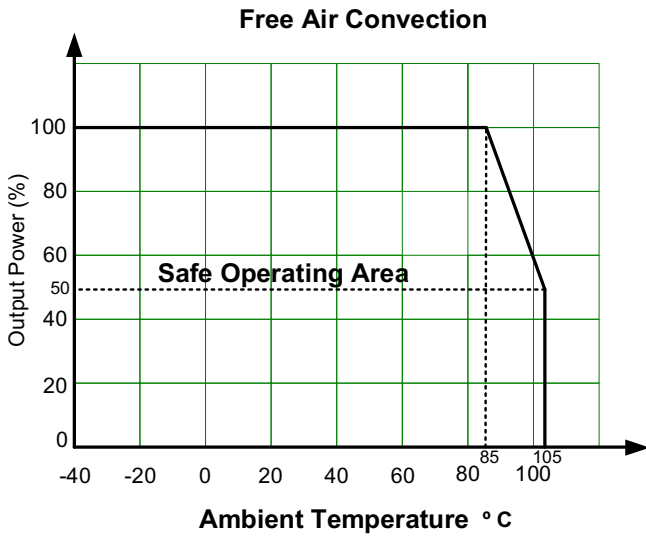
Pin	Dual
1	+ V Input
2	- V Input
5	- V Output
6	Common
7	+ V Output

* N.C. Not Connected

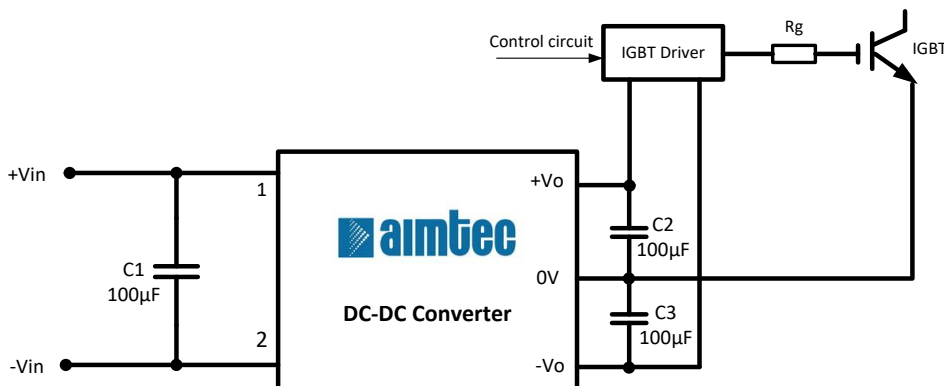
Dimensions



Derating

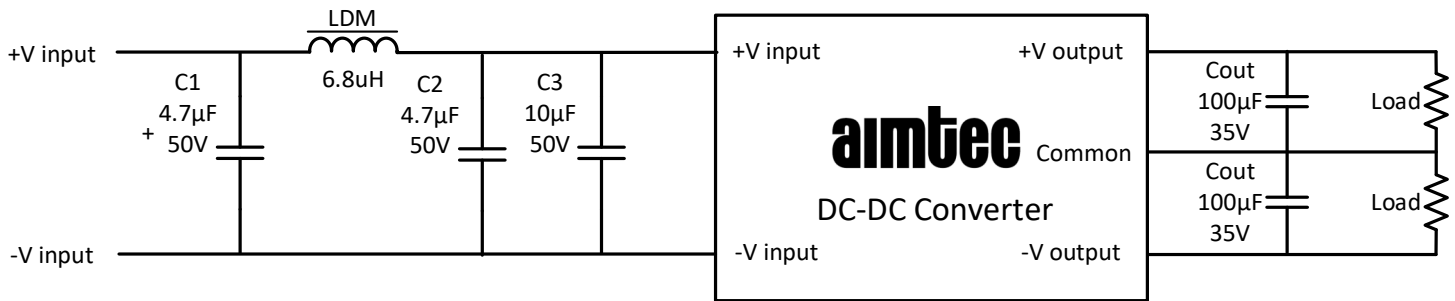


Application Circuit



Note: Low Internal resistance capacitors suggested

EMI Recommended Circuit (Class B for 3500VAC isolation models only)



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.