

FEATURES:



- RoHS compliant
- Power modules for PCB mounting
- Capacitive loading up to 5500 μ F (36-75V Input)
- Remote On/Off control
- Operating temperature range: -40 to +85°C
- Soft start
- High efficiency
- Standard package
- UVLO / OVLO Shutdown
- Thermal shutdown



Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Ripple & Noise Typ.	Isolation (VDC)	Efficiency (%)
AM30K-1203SIZ	9-18	3.3	5.5	80 mV p-p	1500	81
AM30K-1205SIZ	9-18	5	5	80 mV p-p	1500	83
AM30K-1212SIZ	9-18	12	2.5	120 mV p-p	1500	86
AM30K-1215SIZ	9-18	15	2	150 mV p-p	1500	87
AM30K-1224SIZ	9-18	24	1.25	240 mV p-p	1500	86
AM30K-2403SIZ	18-36	3.3	5.5	80 mV p-p	1500	82
AM30K-2405SIZ	18-36	5	5	80 mV p-p	1500	86
AM30K-2412SIZ	18-36	12	2.5	120 mV p-p	1500	88
AM30K-2415SIZ	18-36	15	2	150 mV p-p	1500	88
AM30K-2424SIZ	18-36	24	1.25	240 mV p-p	1500	86
AM30K-4803SIZ	36-75	3.3	5.5	80 mV p-p	1500	82
AM30K-4805SIZ	36-75	5	5	80 mV p-p	1500	86
AM30K-4812SIZ	36-75	12	2.5	120 mV p-p	1500	88
AM30K-4815SIZ	36-75	15	2	150 mV p-p	1500	88
AM30K-4824SIZ	36-75	24	1.25	240 mV p-p	1500	86
AM30K-1203SH30IZ	9-18	3.3	6	80 mV p-p	3000	80
AM30K-1205SH30IZ	9-18	5	5	80 mV p-p	3000	81
AM30K-1212SH30IZ	9-18	12	2.5	120 mV p-p	3000	84
AM30K-1215SH30IZ	9-18	15	2	150 mV p-p	3000	83
AM30K-1224SH30IZ	9-18	24	1.2	240 mV p-p	3000	82
AM30K-2403SH30IZ	18-36	3.3	6	80 mV p-p	3000	80
AM30K-2405SH30IZ	18-36	5	5	80 mV p-p	3000	80
AM30K-2412SH30IZ	18-36	12	2.5	120 mV p-p	3000	84
AM30K-2415SH30IZ	18-36	15	2	150 mV p-p	3000	83
AM30K-2424SH30IZ	18-36	24	1.2	240 mV p-p	3000	83
AM30K-4803SH30IZ	36-75	3.3	6	80 mV p-p	3000	77
AM30K-4805SH30IZ	36-75	5	5	80 mV p-p	3000	82
AM30K-4812SH30IZ	36-75	12	2.5	120 mV p-p	3000	84
AM30K-4815SH30IZ	36-75	15	2	150 mV p-p	3000	85
AM30K-4824SH30IZ	36-75	24	1.2	240 mV p-p	3000	85

Models Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Ripple & Noise Typ.	Isolation (VDC)	Efficiency (%)
AM30K-1205DIZ	9-18	\pm 5	\pm 2.5	80 mV p-p	1500	83
AM30K-1212DIZ	9-18	\pm 12	\pm 1.25	120 mV p-p	1500	86
AM30K-1215DIZ	9-18	\pm 15	\pm 1	150 mV p-p	1500	87
AM30K-2405DIZ	18-36	\pm 5	\pm 2.5	80 mV p-p	1500	86
AM30K-2412DIZ	18-36	\pm 12	\pm 1.25	120 mV p-p	1500	88
AM30K-2415DIZ	18-36	\pm 15	\pm 1	150 mV p-p	1500	86
AM30K-4805DIZ	36-75	\pm 5	\pm 2.5	80 mV p-p	1500	86

Models

Dual output (continued)

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (A)	Ripple & Noise Typ.	Isolation (VDC)	Efficiency (%)
AM30K-4812DIZ	36-75	±12	±1.25	120 mV p-p	1500	88
AM30K-4815DIZ	36-75	±15	±1	150 mV p-p	1500	88
AM30K-1205DH30IZ	9-18	±5	±3	80 mV p-p	3000	81
AM30K-1212DH30IZ	9-18	±12	±1.25	120 mV p-p	3000	83
AM30K-1215DH30IZ	9-18	±15	±1	150 mV p-p	3000	83
AM30K-2405DH30IZ	18-36	±5	±3	80 mV p-p	3000	83
AM30K-2412DH30IZ	18-36	±12	±1.25	120 mV p-p	3000	85
AM30K-2415DH30IZ	18-36	±15	±1	150 mV p-p	3000	85
AM30K-4805DH30IZ	36-75	±5	±3	80 mV p-p	3000	84
AM30K-4812DH30IZ	36-75	±12	±1.25	120 mV p-p	3000	85
AM30K-4815DH30IZ	36-75	±15	±1	150 mV p-p	3000	85

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	12	9-18		VDC
	24	18-36		
	48	36-75		
Filter	π (Pi) Network			
Recommended input fuse (Slow Blow)	12 Vin		8A/250V	
	24 Vin		4A/250V	
	48 Vin		2A/250V	
Remote On/Off Control	On	3.5 to 12VDC or open circuit		
	Off	0 to 1.2VDC or short circuit between pin 2 and 4; typical idle current 3mA		
Absolute Maximum Rating	12 Vin		20	VDC
	24 Vin		40	
	48 Vin		80	
Permissible absolute maximum duration			2	hours

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	3 sec	1500 & 3000		VDC
Resistance		> 1000		MOhm

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Short Circuit protection	Continuous			
Short Circuit restart	Auto recovery			
Over load protection	Auto recovery works at 110% of rated output			
Over voltage protection	Zener diode clamp protection			
Line voltage regulation (Single)	HL-LL	±0.5		%
Line voltage regulation (Dual)	HL-LL	±0.5		%
Load voltage regulation (Single)	25-100%	±0.5		%
Load voltage regulation (Dual)	25-100%	±2		%
Temperature coefficient		±0.05		%/°C
Voltage adjustment range		±10		%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	250		KHz
Operating temperature	With derating above 70°C		-40 to +85	°C
Storage temperature			-55 to +105	°C
Maximum case temperature			95	°C
Thermal shutdown		+105	+115	°C

General Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Cooling		Free air convection		
Humidity			95	%
Case material	Nickel coated copper with non conductive base. Six Sided Shielded			
Weight		50		g
Dimensions (L x W x H)	Tolerance $\pm 0.5\text{mm}$	2.00 x 1.60 x 0.40 inches	50.80 x 40.60x 10.16 mm	
MTBF	> 550 000 hrs (MIL-HDBK -217F, Ground Benign, $t=+25^{\circ}\text{C}$)			
Soldering Temperature	1.5 mm from case for 10 sec		260	$^{\circ}\text{C}$

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.

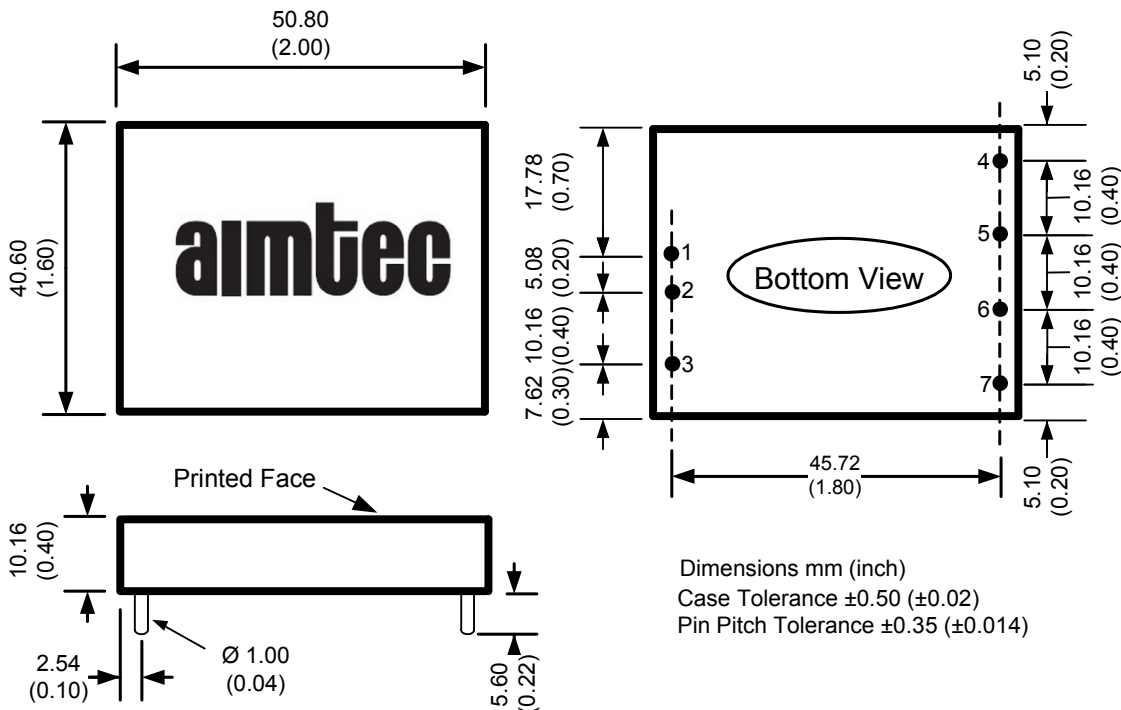
Safety Specifications

Parameters	
Agency approvals	CE
Standards	EN 55022, EN 55024 class A

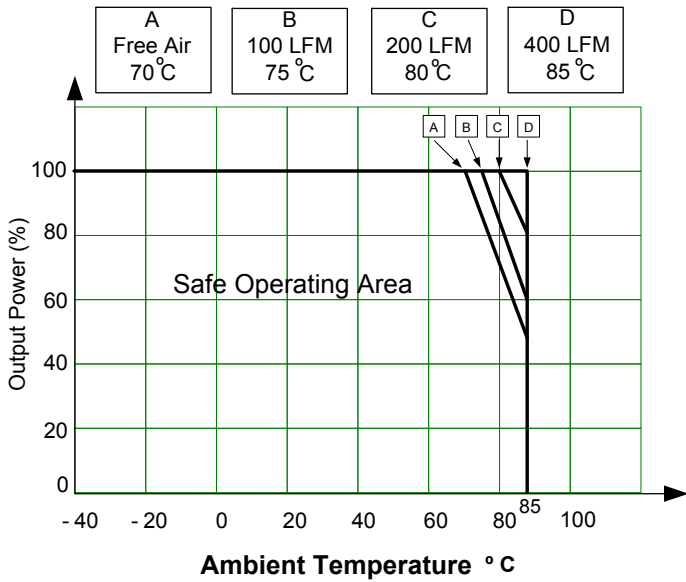
Pin Out Specifications

Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	On/OFF Control	On/OFF Control
4	No pin	+V Output
5	+V Output	Common
6	-V Output	-V Output
7	Trim	Trim

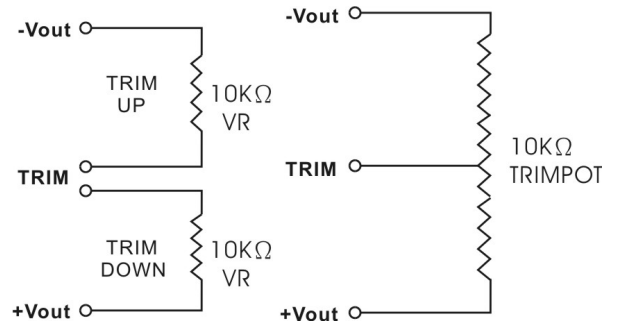
Dimensions



Derating
1500VDC Isolation

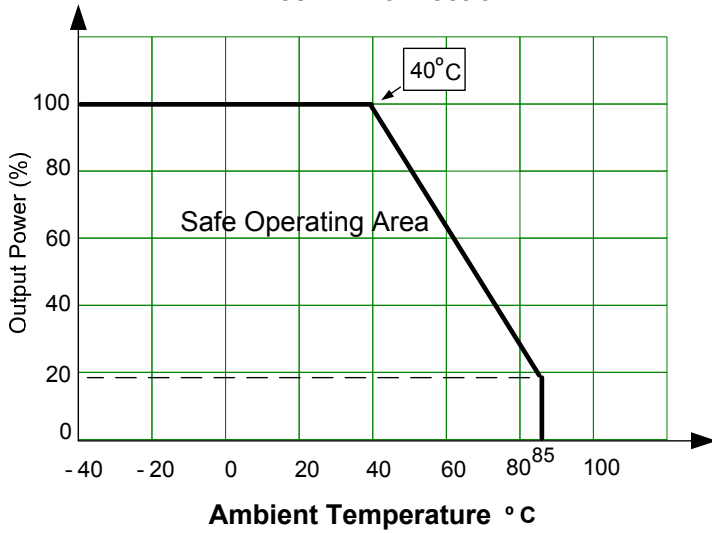


Trimming



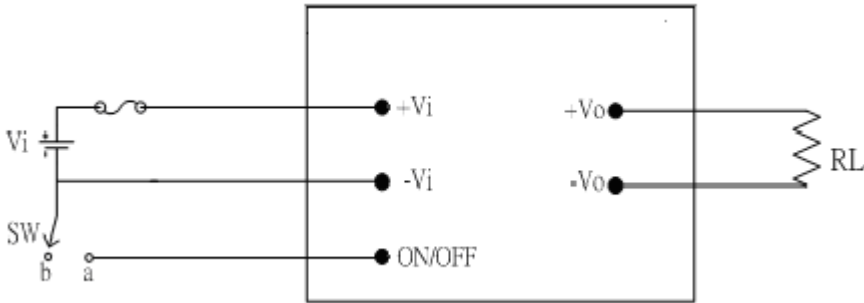
3000VDC Isolation

Free Air Convection

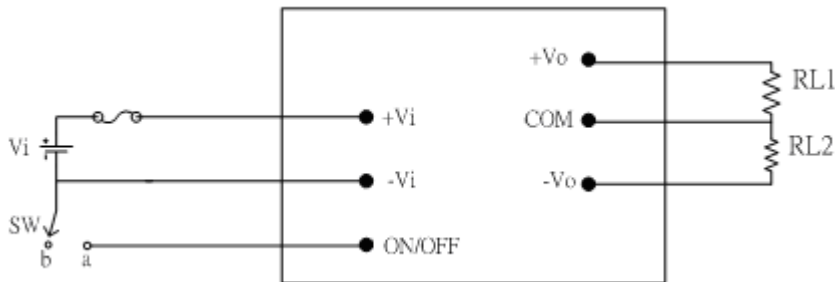


Control ON/OFF pin connection example

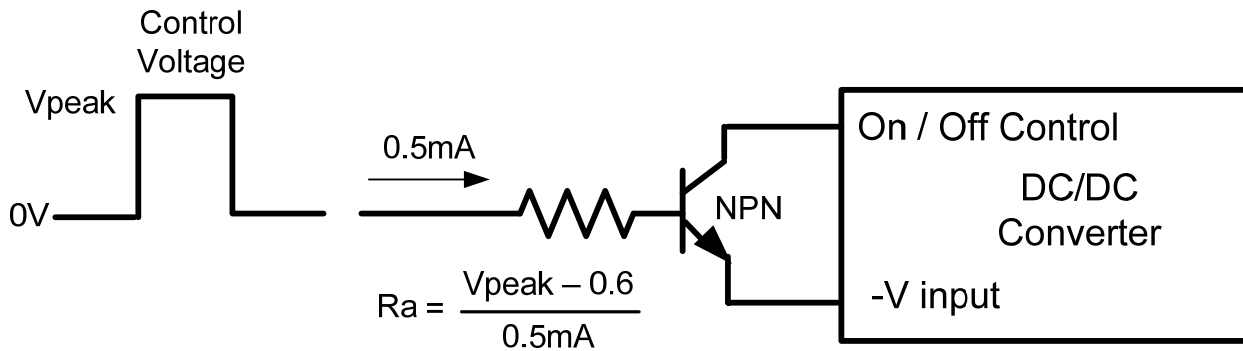
Single Output



Dual Output



Digital Control Circuit:



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 the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.