Models & Specifications

Single Output

Model	Input Voltage (VDC)	Output Voltage (VDC)	Input Current Full | No load typ. (mA)	Output Current max | min (mA)*	Isolation (VDC)	Maximum capacitive Load (µF)	Efficiency Typ. (%)
AM1DR-0503SJZ	5 (4.75-5.25)	3.3	286 / 5	250 / 25	1500	2400	67
AM1DR-0505SJZ #	5 (4.75-5.25)	5	286 / 5	200 / 20	1500	2400	70
AM1DR-0509SJZ #	5 (4.75-5.25)	9	282 / 12	111 / 12	1500	1000	71
AM1DR-0512SJZ #	5 (4.75-5.25)	12	282 / 12	84 / 9	1500	560	72
AM1DR-0515SJZ #	5 (4.75-5.25)	15	274 / 18	67 / 7	1500	560	73
AM1DR-0524SJZ	5 (4.75-5.25)	24	274 / 18	41 / 4	1500	100	73
AM1DR-1205SJZ #	12 (11.4-12.6)	5	115 / 8	200 / 20	1500	2400	73
AM1DR-1209SJZ	12 (11.4-12.6)	9	115 / 8	111 / 12	1500	1000	73
AM1DR-1212SJZ #	12 (11.4-12.6)	12	115 / 8	83 / 9	1500	560	73
AM1DR-1215SJZ #	12 (11.4-12.6)	15	112 / 8	67 / 7	1500	560	75
AM1DR-1505SJZ	15 (14.25-15.75)	5	92 / 8	200 / 20	1500	2400	73
AM1DR-1515SJZ	15 (14.25-15.75)	15	89 / 8	67 / 7	1500	560	75
AM1DR-2403SJZ	24 (22.8-25.2)	3.3	59 / 8	250 / 25	1500	2400	71
AM1DR-2405SJZ	24 (22.8-25.2)	5	58 / 8	200 / 20	1500	2400	73
AM1DR-2409SJZ	24 (22.8-25.2)	9	58 / 8	111 / 12	1500	1000	73
AM1DR-2412SJZ	24 (22.8-25.2)	12	58 / 8	83 / 9	1500	560	73
AM1DR-2415SJZ	24 (22.8-25.2)	15	58 / 8	67 / 7	1500	560	73
AM1DR-0503SH30JZ	5 (4.75-5.25)	3.3	286 / 5	250 / 25	3000	2400	67
AM1DR-0505SH30JZ #	5 (4.75-5.25)	5	286 / 5	200 / 20	3000	2400	70
AM1DR-0509SH30JZ #	5 (4.75-5.25)	9	282 / 12	111 / 12	3000	1000	71
AM1DR-0512SH30JZ #	5 (4.75-5.25)	12	282 / 12	84 / 9	3000	560	72
AM1DR-0515SH30JZ #	5 (4.75-5.25)	15	274 / 18	67 / 7	3000	560	73
AM1DR-0524SH30JZ	5 (4.75-5.25)	24	274 / 18	41 / 4	3000	100	73
AM1DR-1205SH30JZ #	12 (11.4-12.6)	5	115 / 8	200 / 20	3000	2400	73
AM1DR-1209SH30JZ	12 (11.4-12.6)	9	115 / 8	111 / 12	3000	1000	73
AM1DR-1212SH30JZ #	12 (11.4-12.6)	12	115 / 8	83 / 9	3000	560	73
AM1DR-1215SH30JZ #	12 (11.4-12.6)	15	112 / 8	67 / 7	3000	560	75
AM1DR-1505SH30JZ	15 (14.25-15.75)	5	92 / 8	200 / 20	3000	2400	73
AM1DR-1515SH30JZ	15 (14.25-15.75)	15	89 / 8	67 / 7	3000	560	75
AM1DR-2403SH30JZ	24 (22.8-25.2)	3.3	59 / 8	250 / 25	3000	2400	71
AM1DR-2405SH30JZ	24 (22.8-25.2)	5	58 / 8	200 / 20	3000	2400	73
AM1DR-2409SH30JZ	24 (22.8-25.2)	9	58 / 8	111 / 12	3000	1000	73
AM1DR-2412SH30JZ	24 (22.8-25.2)	12	58 / 8	83 / 9	3000	560	73
AM1DR-2415SH30JZ	24 (22.8-25.2)	15	58 / 8	67 / 7	3000	560	73

*** Converters must be operated within the required output range.**

Input Specification

Parameters	Conditions	Typical	Maximum	Units
Filter	Capacitor			
Input reflected ripple current		15		mA

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 1mA	>1500		VDC
	60 sec, leakage ≤ 1mA for H30 models	>3000		VDC
Resistance	500VDC	>1000		MΩ
Capacitance	100kHz/0.1V	20		pF

Output Specification

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy			±3	%
Line regulation	Per 1% Vin change		±0.25	%
Load regulation	10-100% load, 3.3Vout		±3	%
	10-100% load, others		±2	%
Ripple & Noise*	5Vin, 24Vout models	50	100	mV pk-pk
	5Vin, other models	30	75	mV pk-pk
	12/15/24Vin, 15Vout models	80	150	mV pk-pk
	12/15/24Vin, other models	30	100	mV pk-pk
Temperature coefficient		±0.02		%/°C

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.

General Specifications

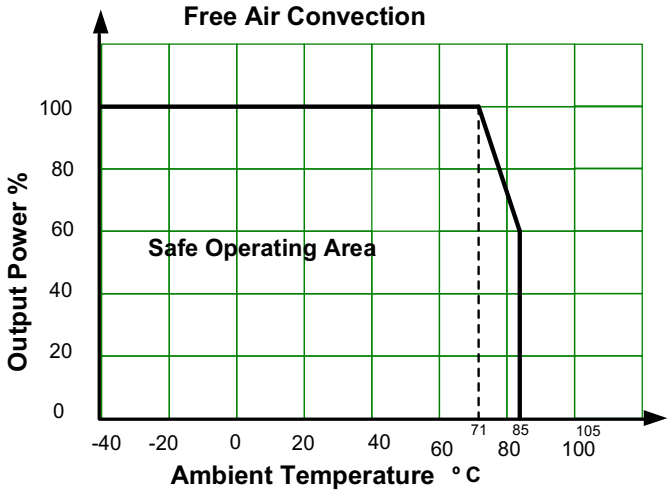
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	Full load, nominal input, 5Vin models	270		KHz
	Full load, nominal input, other models	260		KHz
Short circuit protection	Continuous, Auto recovery			
Operating temperature	With derating at 71°C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Case temperature rise	Ambient temperature at 25°C, 5Vin 3.3Vout model	30		°C
	Ambient temperature at 25°C, other models	25		°C
Manual soldering temperature	1.5mm away from case, duration ≤ 10sec		300	°C
Cooling	Free air convection			
Humidity	Non-condensing	>5	95	% RH
Vibration	10-150Hz, 5G, 30Min, along all axis			
Case material	Black plastic (flammability to UL 94V-0)			
Weight		2.1		g
Dimensions (L x W x H)		0.77 x 0.24 x 0.40 inches (19.65 x 6.00 x 10.16 mm)		
MTBF	3 500 000 hrs (MIL-HDBK -217F, t=+25°C) / Full Load			

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.

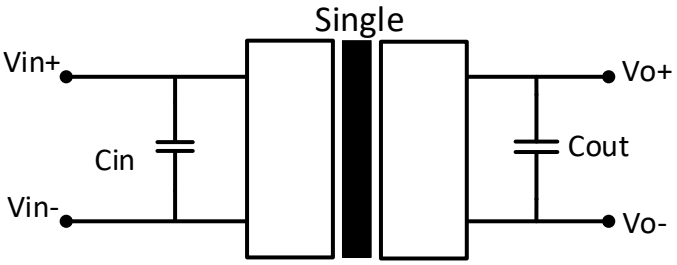
Safety Specifications

Parameters		
Agency approval	CE/BS EN62368-1 ; cULus UL62368-1 (For models marked with # only)	
Standards	Information technology Equipment	Design to meet IEC62368-1
	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B with the recommended EMI circuit
	Electrostatic Discharge Immunity	IEC 61000-4-2 Air ±8KV, Contact ±4KV, Criteria B for 5Vin models IEC 61000-4-2 Air ±8KV, Contact ±6KV, Criteria B for 12/15/24Vin models

Derating



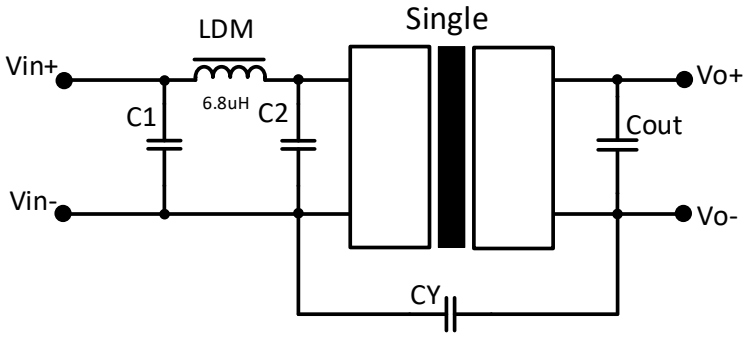
Typical application circuit



Vin	Cin	Single output models	
		Vout	Cout
5V	4.7μF	3.3/5V	10μF/16V
12/15V	2.2μF/25V	9V	2.2μF/16V
24	1μF/50V	12V	2.2μF/25V
		15V	1μF/25V

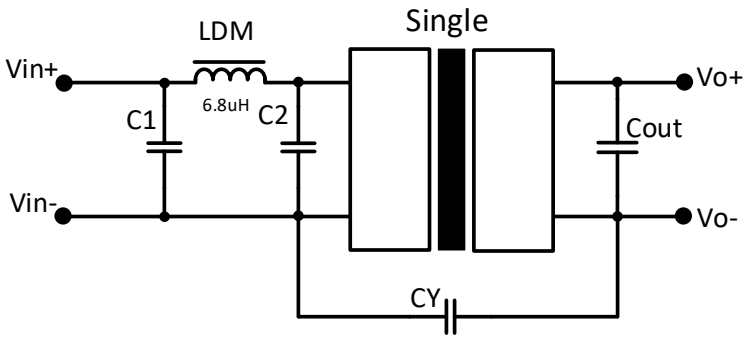
Recommended EMI circuit

5Vin models



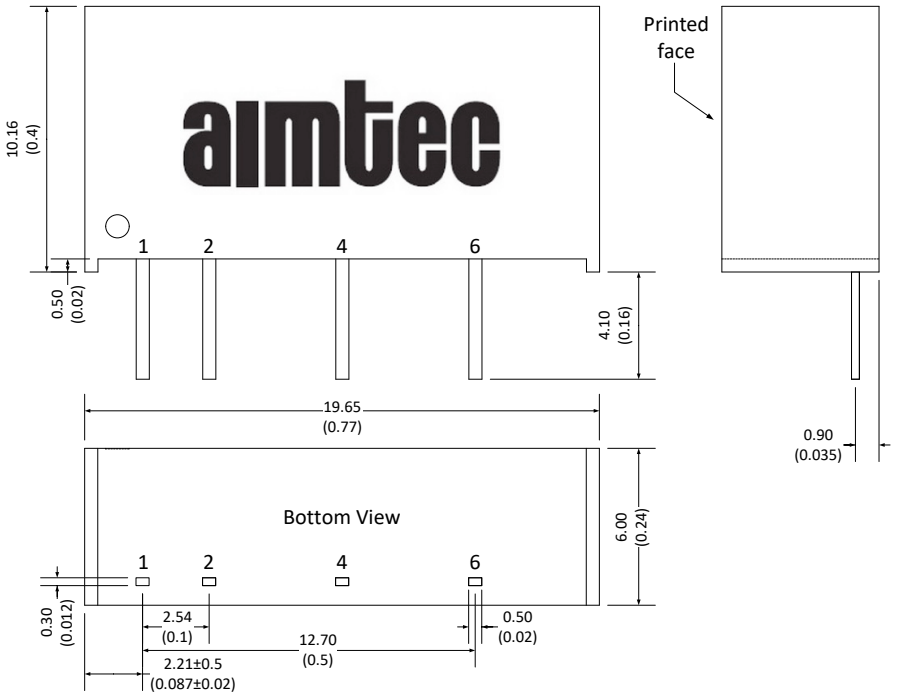
Vout	C1/C2	CY
3.3/5/9V	4.7μF/25V	-
12/15/24V	4.7μF/25V	1nF/4kVdc

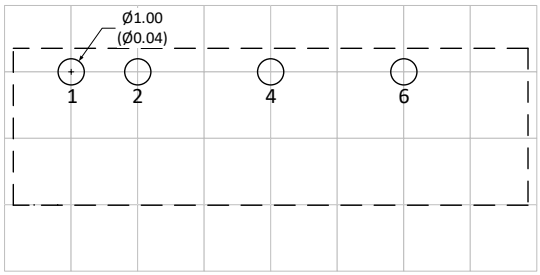
12/15/24Vin models



Isolation	C1/C2	CY
1.5KV	4.7μF/50V	270pF/2kVdc
3KV	4.7μF/50V	270pF/3kVdc

Dimensions





Grid size: 2.54*2.54mm

Note:
Unit: mm(inch)
General tolerance: ±0.25 (0.01)
Pin tolerance: ±0.1 (0.004)

Pin Out Specifications	
Pin	Single
1	+V Input
2	-V Input
4	-V Output
6	+V Output

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