

## A\_S-1W / A\_D-1W Series

**FIXED INPUT ISOLATED & UNREGULATED  
1W OUTPUT DUAL OUTPUT  
SIP(DIP) PACKAGE**

**RoHS** **US**  
multi-country patent protection

### FEATURES

- High Efficiency up to 80%
- Positive & Negative Voltage Output
- Small Footprint
- SIP & DIP Package Styles
- Industry Standard Pinout
- UL94-V0 Package
- No Heatsink Required
- 1KVDC Isolation
- Power Density 0.85W/cm<sup>3</sup>
- Temperature Range: -40°C~+85°C
- No External Component Required
- Low Cost
- RoHS Compliance

### APPLICATIONS

The A\_S(D)-1W Series are specially designed for applications where a group of polar power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

- 1) Where the voltage of the input power supply is fixed (voltage variation  $\leq \pm 10\%$ );
- 2) Where isolation is necessary between input and output (isolation voltage = 1000VDC);
- 3) Where the regulation of the output voltage and the output ripple noise are not demanding.

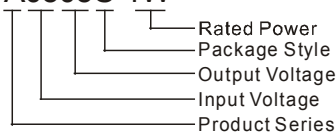
Such as: purely digital circuits, ordinary low frequency analog circuits, and IGBT power device driving circuits.

These products don't apply to:

- 1) Where the input supply voltage varied (variation  $\geq \pm 10\%$ ), otherwise our company's WRA series is recommended;
- 2) Where the isolation voltage between input and output is required to be  $> 1000\text{VDC}$ , otherwise our company's E\_S (D)-1W Series of products are recommended;
- 3) Circuits in which the output voltage regulation is demanding, otherwise our company's IA Series or WRA Series are recommended.
- 4) When the actual output power is less than 0.25w, the A\_S(D)-0.25W series are recommended.

### MODEL SELECTION

**A0505S-1W**



PRODUCT PROGRAM							
Part Number	Input		Output			Efficiency (% Typ)	Package Style
	Voltage (VDC)		Voltage (VDC)	Current (mA)			
	Nominal	Range		Max	Min		
A0505S/D-1W	5	4.5~5.5	±5	±100	±10	72	SIP/DIP
A0509S/D-1W	5	4.5~5.5	±9	±56	±6	75	SIP/DIP
A0512S/D-1W	5	4.5~5.5	±12	±42	±5	78	SIP/DIP
A0515S/D-1W	5	4.5~5.5	±15	±33	±4	79	SIP/DIP
A1205S/D-1W	12	10.8~13.2	±5	±100	±10	74	SIP/DIP
A1209S/D-1W	12	10.8~13.2	±9	±56	±6	76	SIP/DIP
A1212S/D-1W	12	10.8~13.2	±12	±42	±5	79	SIP/DIP
A1215S/D-1W	12	10.8~13.2	±15	±33	±4	80	SIP/DIP
A2405S/D-1W	24	21.6~26.4	±5	±100	±10	74	SIP/DIP
A2409S/D-1W	24	21.6~26.4	±9	±56	±6	76	SIP/DIP
A2412S/D-1W	24	21.6~26.4	±12	±42	±5	80	SIP/DIP
A2415S/D-1W	24	21.6~26.4	±15	±33	±4	81	SIP/DIP

Note: The A\_S(D)-0.25W series also are available in our company.

COMMON SPECIFICATIONS	
Short circuit protection	1 second
Temperature rise at full load	25°C MAX, 15°C TYP
Cooling	Free air convection
Operating temperature range	-40°C~+85°C
Storage temperature range	-55°C ~+125°C
Lead temperature	300°C (1.5mm from case for 10 seconds)
Storage humidity range	≤ 95%
Case material	Plastic (UL94-V0)
MTBF	>3,500,000 hours

ISOLATION SPECIFICATIONS					
Item	Test conditions	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute	1000			VDC
Isolation resistance	Test at 500VDC	1000			MΩ

OUTPUT SPECIFICATIONS					
Item	Test conditions	MIN	TYP	MAX	Units
Output power		0.1		1	W
Line regulation	For Vin change of 1%			1.2	%
Load regulation	10% to 100% full load		10	15	%
Output voltage accuracy	See tolerance envelope graph				
Temperature drift	100% full load			0.03	%/°C
Output ripple	20MHz Bandwidth		50	75	mVp-p
Switching frequency	Full load, nominal input		100		KHz



**MORNSUN Science & Technology Ltd.**

Address: 8th floor 8th building, Hangzhou Industrial District, Guangzhou, China  
Tel: 86-20-38601850  
Fax: 86-20-38601272  
<http://www.mornsun-power.com>

Note:

1. All specifications measured at TA=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
2. See below recommended circuits for more details.

