



## FEATURES

- ◆ RoHS compliant
- ◆ Efficiency up to 86%
- ◆ SIP10 Package
- ◆ Wide temperature performance at full 1 Watt load. -40°C to 85°C
- ◆ UL 94V-0 package material
- ◆ No heatsink required
- ◆ Small footprint
- ◆ Industry standard pinout
- ◆ Power sharing on output
- ◆ 1KVDC isolation
- ◆ 5V, 12V and 24V input
- ◆ 3.3V, 5V, 9V, 12V and 15V output
- ◆ Internal SMD construction
- ◆ Fully encapsulated with toroidal Magnetics
- ◆ No external components required
- ◆ MTTF up to 1.5 million hours

## MODEL SELECTION

A<sup>①</sup> 05<sup>②</sup> 05<sup>③</sup> X<sup>④</sup> S<sup>⑤</sup> R<sup>⑥</sup>

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ Fixed Input
- ⑤ SIP Package
- ⑥ Rated Power

## APPLICATIONS

The IA\_XS-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
- 2) where isolation is necessary between input and
- 3) where the regulation of the output voltage and the output ripple noise are demanded.



Order code	Input		Output			Efficiency (% Typ)	Switching Frequency (KHz Typ)
	Voltage (VDC)		Voltage (VDC)	Current			
	Nominal	Range		Max	Min		
A0503XSR	5	4.75-5.25	±3.3	±100	±10	69	83
A0505XSR	5	4.75-5.25	±5	±100	±10	54	83
A0509XSR	5	4.75-5.25	±9	±56	±6	63	83
A0512XSR	5	4.75-5.25	±12	±42	±5	63	83
A0515XSR	5	4.75-5.25	±15	±33	±4	65	250
A1203XSR	12	11.4-12.6	±3.3	±100	±10	72	100
A1205XSR	12	11.4-12.6	±5	±100	±10	56	83
A1209XSR	12	11.4-12.6	±9	±56	±6	62	83
A1212XSR	12	11.4-12.6	±12	±42	±5	65	83
A1215XSR	12	11.4-12.6	±15	±33	±4	86	83
A2403XSR	24	22.8-25.2	±3.3	±100	±10	72	83
A2405XSR	24	22.8-25.2	±5	±100	±10	54	83
A2409XSR	24	22.8-25.2	±9	±56	±6	62	83
A2412XSR	24	22.8-25.2	±12	±42	±5	64	83
A2415XSR	24	22.8-25.2	±15	±33	±4	66	300

Parameter	Test conditions	Min.	Typ.	Max.	Units
Isolation test voltage	Flash tested for 1 minute and 1mA max	1000			VDC
Isolation resistance	Test at Viso=500VDC	1000			

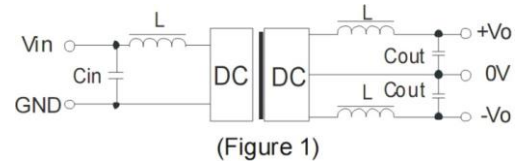
Parameter	Test conditions	Min	Typ.	Max.	Units
Output power		0.1		1	W
Line regulation	For Vin change of ±5%			±0.25	%
Load regulation	10% to 100% full load			±1	%
Output voltage accuracy	100% full load			±3	%
Temperature drift	100% full load			0.03	%/°C

Parameter	Conditions	Min.	Typ.	Max.	Units
Storage humidity range				95	%
Operating temperature		-40		85	°C
Storage temperature		-55		125	°C
Lead temperature	1.5mm from case for 10 seconds			300	°C
Temp.rise at full load			20	30	°C
Cooling		Free air convection			
Case material		Plastic(UL94-V0)			
Short circuit protection	IA(XX)05XS-1W	Continuous			
	Others*			1	S
MTBF		3500			K hours
Weight			5.2		g

\*Supply voltage must be discontinued at the end of short circuit duration.

### Recommended circuit

If you want to further decrease the input/output ripple, an "LC" filtering network may be connected to the input and output ends of the DC/DC converter, see (Figure 1).



It should also be noted that the inductance and the frequency of the "LC" filtering network should be staggered with the DC/DC frequency to avoid mutual interference. However, the capacitance of the output filter capacitor must be proper. If the capacitance is too big, a startup problem might arise. For every channel of output, provided the safe and reliable operation is ensured, the greatest capacitance of its filter capacitor sees (Table 1).

### EXTERNAL CAPACITOR TABLE (TABLE 1)

$V_{in}$ (VDC)	$C_{in}$ ( $\mu F$ )	$V_{out}$	$C_{out}$
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