

**DC-DC Astra**  
**AS1/4-xxSxx series**  
**AS1/4-xxDxx series**



**1000Vdc Isolation Single & Dual Output 0,25Watt Dc-Dc Converter**

**FEATURES:**

4PIN SIP & 8PIN DIL Package

High Efficiency up to 85%.

Unregulated Output Types

Recognized By UL 60950-1

Internal SMD Construction ● No External Component Required

Operating Temperature: -40°C TO +85°C ● Industry Standard Pinout

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified				
Part Number	Output Voltage	Output Current	Efficiency	Package Style
	Vdc	mA	%TYP	"X"
AS1/4-xxS03A	3,3	76	65	A
AS1/4-xxS05A	5	50	65	A
AS1/4-xxS09A	9	28	70	A
AS1/4-xxS03A	12	21	70	A
AS1/4-xxS15A	15	16	70	A
AS1/4-xxS24A	24	10	70	A
AS1/4-xxS03_	3.3	76	65	ABEDC
AS1/4-xxS05_	5	50	65	ABEDC
AS1/4-xxS09_	9	28	70	ABEDC
AS1/4-xxS12_	12	21	70	ABEDC
AS1/4-xxS15_	15	16	70	ABEDC
AS1/4-xxS24_	24	10	70	ABEDC
AS1/4-xxD03_	± 3.3	± 38	65	ABEDC
AS1/4-xxD05_	± 5	± 25	65	D/E
AS1/4-xxD09_	± 9	± 14	70	D/E
AS1/4-xxD12_	± 12	± 10	70	D/E
AS1/4-xxD15_	± 15	± 8	70	D/E
AS1/4-xxD24_	± 24	± 5	70	D/E

Note:1. "XX" Is Input Voltage:03=3.3Vdc,05=5Vdc,09=9Vdc, 12=12Vdc, 15=15Vdc,24=24Vdc

2. Over 15V.24V input voltage using the A/B/E/D Package.

3. The input voltage increases, there will be an increase in efficiency.

Input Specifications					
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom			± 5	%
Filter	Capacitor				

Output Specifications					
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			± 5	%
Short Circuit Protection	Short Term			1 Sec	
Line Regulation	For 1.0% OF Vin		1.2		%
Load Regulation	3.3V,5V(10% To 100% F.L)			15	%
Load Regulation	9V,12V,15V,24V(10% To 100% F.L)			10	%
Ripple & Noise	BW=DC To 20MHz			100	mVp-p
Transient response setting time	50% load step change		350		us

General Specifications					
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			M Ω
Switching Frequency	Full load,nominal input		100		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25°C	3500000			Hours
Weight	Package A/D/E/B/C		1.5/1.5/1.9/1.9/1.1		g
Dimensions	Package A		11.50x6.00x10.00		mm
Dimensions	Package D		12.70x10.16x6.80		mm
Dimensions	Package E		12.70x10.16x7.50		mm
Dimensions	Package B		11.50x7.50x10.00		mm
Dimensions	Package C		11.50x6.0x7.50		mm

ООО Компания "Элемент"

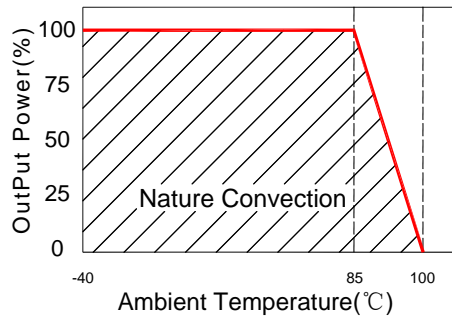
г.Новосибирск, ул.Некрасова д.50 оф.902

8-913-95-95-400

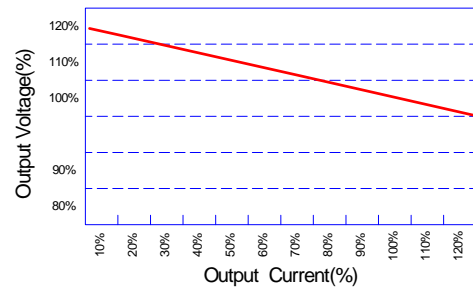
тел. (383)233-77-25, 233-77-26

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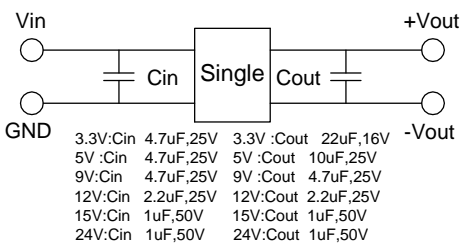
#### Temperature Derating Graph



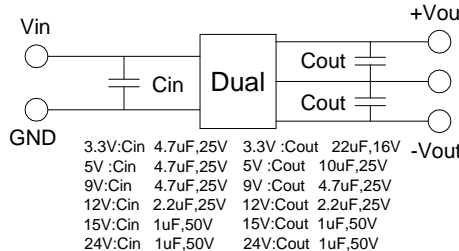
#### Tolerance Envelope Graph



#### Recommended Test Circuit



3.3V:Cin	4.7uF,25V	3.3V:Cout	22uF,16V
5V:Cin	4.7uF,25V	5V:Cout	10uF,25V
9V:Cin	4.7uF,25V	9V:Cout	4.7uF,25V
12V:Cin	2.2uF,25V	12V:Cout	2.2uF,25V
15V:Cin	1uF,50V	15V:Cout	1uF,50V
24V:Cin	1uF,50V	24V:Cout	1uF,50V

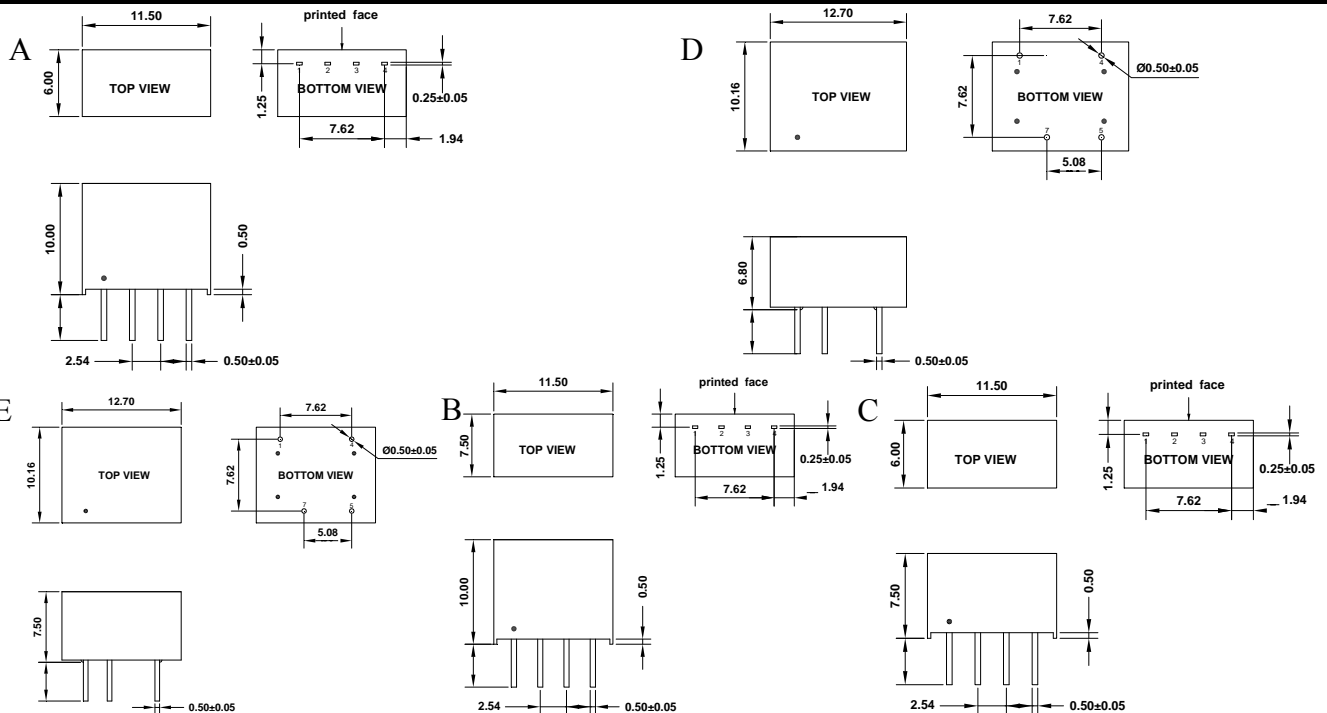


3.3V:Cin	4.7uF,25V	3.3V:Cout	22uF,16V
5V:Cin	4.7uF,25V	5V:Cout	10uF,25V
9V:Cin	4.7uF,25V	9V:Cout	4.7uF,25V
12V:Cin	2.2uF,25V	12V:Cout	2.2uF,25V
15V:Cin	1uF,50V	15V:Cout	1uF,50V
24V:Cin	1uF,50V	24V:Cout	1uF,50V

#### Part Number

AS1/4 - 05 D 05 A  
 1 2 3 4 5  
 1:Series  
 2:Input Voltage  
 3: Dual Output  
 4: Output voltage  
 5: Case

#### Markings and dimensions



Unit:mm Unless otherwise specified, all tolerances are  $\pm 0.25$

#### PIN Connection

PIN	1	2	3	4	5	6	7	8
SINGLE(4PIN)	-Vin	+Vin	-Vout	+Vout				
SINGLE(8PIN)	-Vin	NO PIN	NO PIN	+Vin	+Vout	NO PIN	-Vout	NC
DUAL(8PIN)	-Vin	NO PIN	NO PIN	+Vin	+Vout	NO PIN	COM	-Vout