

**DC-DC Astra**  
**AS2-xxDxxWF**  
**AS2-xxSxxWF**

ООО Компания "Элемент"



**1000Vdc Isolation Single & Dual Output 2 Watt Dc-Dc Converter**

**FEATURES:**

7PIN SIP Package

High Efficiency up to 88%

Unregulated output Types

Internal SMD Construction

Industry Standard Pinout

Operating Temperature: -40°C TO +85°C

**Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified**

| Part Number | Output Voltage | Output Current | Ripple & Noise |            | Efficiency |
|-------------|----------------|----------------|----------------|------------|------------|
|             | Vdc            | mA             | Typ(mVp-p)     | Max(mVp-p) | %Typ       |
| AS2-05S05WF | 5              | 400            | 40             | 60         | 82         |
| AS2-05S09WF | 9              | 222            | 40             | 60         | 86         |
| AS2-05S12WF | 12             | 167            | 50             | 80         | 87         |
| AS2-05S15WF | 15             | 133            | 50             | 80         | 86         |
| AS2-12S05WF | 5              | 400            | 40             | 60         | 83         |
| AS2-12S09WF | 9              | 222            | 40             | 60         | 87         |
| AS2-12S12WF | 12             | 167            | 50             | 80         | 88         |
| AS2-12S15WF | 15             | 133            | 50             | 80         | 87         |
| AS2-15S05WF | 5              | 400            | 40             | 60         | 84         |
| AS2-15S09WF | 9              | 222            | 40             | 60         | 86         |
| AS2-15S12WF | 12             | 167            | 50             | 80         | 87         |
| AS2-15S15WF | 15             | 133            | 50             | 80         | 88         |
| AS2-24S05WF | 5              | 400            | 40             | 60         | 84         |
| AS2-24S09WF | 9              | 222            | 40             | 60         | 87         |
| AS2-24S12WF | 12             | 167            | 50             | 80         | 87         |
| AS2-24S15WF | 15             | 133            | 50             | 80         | 88         |
| AS2-05D05WF | ±5             | ±200           | 50             | 80         | 82         |
| AS2-05D09WF | ±9             | ±111           | 50             | 80         | 85         |
| AS2-05D12WF | ±12            | ±84            | 50             | 80         | 86         |
| AS2-05D15WF | ±15            | ±67            | 50             | 80         | 86         |
| AS2-12D05WF | ±5             | ±200           | 50             | 80         | 84         |
| AS2-12D09WF | ±9             | ±111           | 50             | 80         | 87         |
| AS2-12D12WF | ±12            | ±84            | 50             | 80         | 87         |
| AS2-12D15WF | ±15            | ±67            | 50             | 80         | 87         |
| AS2-15D05WF | ±5             | ±200           | 50             | 80         | 84         |
| AS2-15D09WF | ±9             | ±111           | 50             | 80         | 86         |
| AS2-15D12WF | ±12            | ±84            | 50             | 80         | 88         |
| AS2-15D15WF | ±15            | ±67            | 50             | 80         | 88         |
| AS2-24D05WF | ±5             | ±200           | 50             | 80         | 85         |
| AS2-24D09WF | ±9             | ±111           | 50             | 80         | 87         |
| AS2-24D12WF | ±12            | ±84            | 50             | 80         | 88         |
| AS2-24D15WF | ±15            | ±67            | 50             | 80         | 88         |

**Input Specifications**

| Parameters        | Conditions | Min | Typ | Max | Units |
|-------------------|------------|-----|-----|-----|-------|
| Voltage Tolerance | Vo, Io Nom |     |     | ±10 | %     |
| 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          | 5V,9V (10% To 100% F.L)      |     |     | 10    | %     |
| Load Regulation          | 12V,15V (10% To 100% F.L)    |     |     | 7     | %     |
| Load Regulation          | ±5V, ±9V (10% To 100% F.L)   |     |     | 9     | %     |
| Load Regulation          | ±12V, ±15V (10% To 100% F.L) |     |     | 6     | %     |

ООО Компания "Элемент"

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

[www.astra-power.ru](http://www.astra-power.ru)

тел. (383)233-77-25, 233-77-26

моб.тел. 8-913-95-95-400

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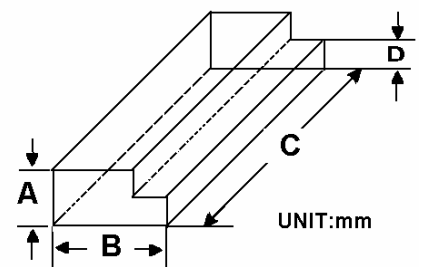
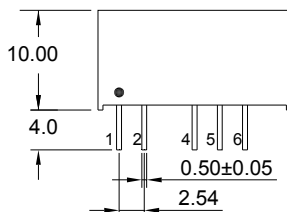
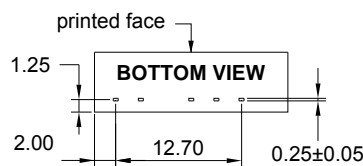
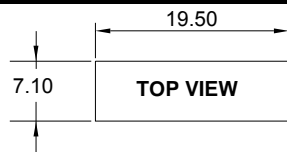
**1000Vdc Isolation Single & Dual Output 2 Watt Dc-Dc Converter**

| General Specifications |                         |         |               |     |       |
|------------------------|-------------------------|---------|---------------|-----|-------|
| Parameters             | Conditions              | Min     | Typ           | Max | Units |
| Isolation Resistance   | 500Vdc                  | 1000    |               |     | MΩ    |
| Switching Frequency    | Full load,nominal input |         | 75            |     | KHz   |
| Operation Temperature  |                         | -40     |               | +85 | °C    |
| Humidity               | Non Condensing          |         |               | 95  | %     |
| Cooling                | Free air Convection     |         |               |     |       |
| Case material          | DAP                     |         |               |     |       |
| MTBF                   | MIL-HDBK-217F@25°C      | 3500000 |               |     | Hours |
| Weight                 |                         |         | 2.7           |     | g     |
| Dimensions             |                         |         | 19.5x7.1x10.0 |     | mm    |

| Temperature Derating Graph | Part Number  |
|----------------------------|--|
|                            | <p>AS2 - 05 D 05 W F</p> <p>1 2 3 4 5 6</p> <p>1:Series<br/>                 2:Input Voltage<br/>                 3:(D) Dual (S) Single Output<br/>                 4.Output voltage<br/>                 5:Case<br/>                 6.Efficiency up to 88%</p> |

| Recommended Test Circuit   |  |  |  |
|--|--|--|--|
|  |  |  |  |
| <p>5V :Cin 4.7uF,25V 5V :Cout 10uF,25V<br/>                 12V:Cin 2.2uF,25V 9V :Cout 4.7uF,25V<br/>                 15V:Cin 1uF,50V 12V:Cout 2.2uF,25V<br/>                 24V:Cin 1uF,50V 15V:Cout 1uF,50V</p> | <p>5V :Cin 4.7uF,25V 5V :Cout 10uF,25V<br/>                 12V:Cin 2.2uF,25V 9V :Cout 4.7uF,25V<br/>                 15V:Cin 1uF,50V 12V:Cout 2.2uF,25V<br/>                 24V:Cin 1uF,50V 15V:Cout 1uF,50V</p> |  |  |

**Markings and dimensions** **Packaging**



UNIT:mm Unless otherwise specified,all tolerances are ±0.25

| PIN Connection |      |      |       |        |       |
|----------------|------|------|-------|--------|-------|
| PIN            | 1    | 2    | 4     | 5      | 6     |
| Single         | +Vin | -Vin | -Vout | No Pin | +Vout |
| Dual           | +Vin | -Vin | -Vout | Com    | +Vout |

| Size(mm) |      |      |     |
|----------|------|------|-----|
| A        | B    | C    | D   |
| 9.5      | 16.5 | 5.22 | 5.0 |