

S-Series

1W SMD DC/DC-Converters

- Lead Frame and Injection Technology
- 8 Pin and 10 Pin SMD Package Style
- 1kVDC Isolation
- Input Filter with Internal Capacitor
- 100% Burn-In
- Single and Dual Output

Selection Guide (See Model Code Information on Page 31)

| Ordering Code | Nominal Input Voltage (VDC) | Max. Output Current (mA) | Input Current | | Output Voltage (VDC) | Max. Output Ripple (mV) | Max. Load Regulation (%) | Efficiency Typical (%) |
|---------------|-----------------------------|--------------------------|---------------|----------------|----------------------|-------------------------|--------------------------|------------------------|
| | | | No Load (mA) | Full Load (mA) | | | | |

Single Output

| | | | | | | | | |
|----------|----|-----|----|-----|-----|-----|----|----|
| S-053.3S | 5 | 200 | 22 | 171 | 3.3 | 50 | 14 | 77 |
| S-0505S | 5 | 200 | 31 | 250 | 5 | 60 | 8 | 80 |
| S-0509S | 5 | 110 | 30 | 256 | 9 | 70 | 8 | 79 |
| S-0512S | 5 | 84 | 31 | 252 | 12 | 80 | 8 | 80 |
| S-0515S | 5 | 67 | 35 | 245 | 15 | 100 | 8 | 82 |
| S-123.3S | 12 | 200 | 15 | 73 | 3.3 | 50 | 12 | 75 |
| S-1205S | 12 | 200 | 17 | 100 | 5 | 60 | 8 | 81 |
| S-1209S | 12 | 110 | 18 | 103 | 9 | 70 | 8 | 80 |
| S-1212S | 12 | 84 | 18 | 103 | 12 | 80 | 8 | 81 |
| S-1215S | 12 | 67 | 18 | 100 | 15 | 100 | 8 | 83 |

Dual Output

| | | | | | | | | |
|---------|----|------|----|-------|----|----|----|----|
| S-0505D | 5 | ±100 | 30 | 277.8 | 5 | 70 | 12 | 72 |
| S-0509D | 5 | ±56 | 26 | 255 | 9 | 70 | 12 | 79 |
| S-0512D | 5 | ±42 | 27 | 252 | 12 | 90 | 10 | 80 |
| S-0515D | 5 | ±34 | 28 | 248 | 15 | 90 | 10 | 82 |
| S-1205D | 12 | ±100 | 18 | 112.6 | 5 | 70 | 12 | 74 |
| S-1209D | 12 | ±56 | 18 | 105 | 9 | 70 | 12 | 80 |
| S-1212D | 12 | ±42 | 18 | 103.7 | 12 | 90 | 10 | 81 |
| S-1215D | 12 | ±34 | 18 | 102.4 | 15 | 90 | 10 | 83 |

S-Series

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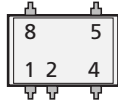
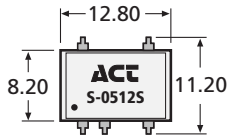
Specifications – Typical at +25°C, Unless Otherwise Noted

| | | Minimum | Typical | Maximum |
|---|-----------------|---------|--|------------------------------|
| Input, Absolute Voltage Range | 5V input types | -0.7VDC | 5VDC | 7.5 VDC |
| | 12V input types | -0.7VDC | 12VDC | 15 VDC |
| Output Power | | | | 1.0W |
| Output Short Circuit Duration | | | | 1.0 Second |
| Voltage Accuracy (nominal input) | | | 1.0% | 3.0% |
| Output Voltage Balance (only for dual output models, nominal input) | | | | ±1% |
| Switching Frequency (nominal input) | | 70kHz | 100kHz | 150kHz |
| Temperature Coefficient | | | ±0.01% / °C | ±0.02% / °C |
| Isolation Voltage (60 seconds/0.5mA) | | | | 1000VDC |
| Isolation Resistance (500VDC) | | | | 1000MΩ |
| Isolation Capacitance, Single output Models | 5V input types | 8 pF | 15pF | 20pF |
| | 12V input types | | | |
| Dual output Models | 5V input types | 10 pF | 25pF | 30pF |
| | 12V input types | | | |
| Line Regulation (per 1% change in input change) | | | | 1.3% |
| Efficiency | | | | up to 83% |
| Temperature Coefficient (nominal input) | | | ±0.01% / °C | ±0.02% / °C |
| Operating Temperature (output at full load) | | | | -40°C to +85°C |
| Storage Temperature | | | | -55°C to +125°C |
| Lead Temperature (1.5 mm from case for 10 seconds) | | | | +300°C |
| Dimensions | 8 Pin SMD | | 12.80 x 11,20 x 7.25 mm 0.50 x 0.44 x 0.29" | |
| | 10 Pin SMD | | 15.20 x 11,20 x 7.25 mm 0.60 x 0.44 x 0.29" | |
| Case Material | | | | Non-conductive Black Plastic |

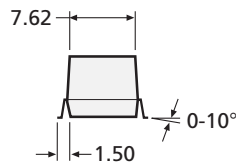
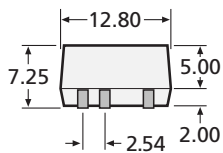
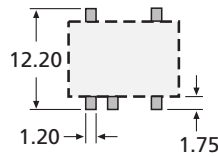
S-Series

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8 Pin SMD Package Style and Pinning (mm)



Recommended Footprint Details

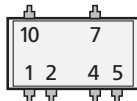
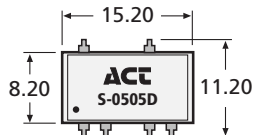


Pin Connections

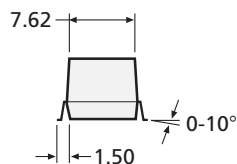
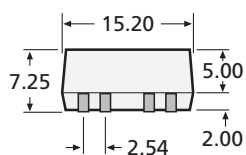
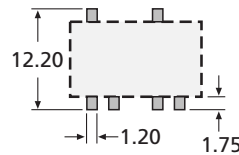
| Pin # | Single Output |
|-------|---------------|
| 1 | -Vin |
| 2 | +Vin |
| 4 | -Vout |
| 5 | +Vout |
| 8 | NC |

Tolerance:
x.xx = ±0.25mm

10 Pin SMD Package Style and Pinning (mm)



Recommended Footprint Details



Pin Connections

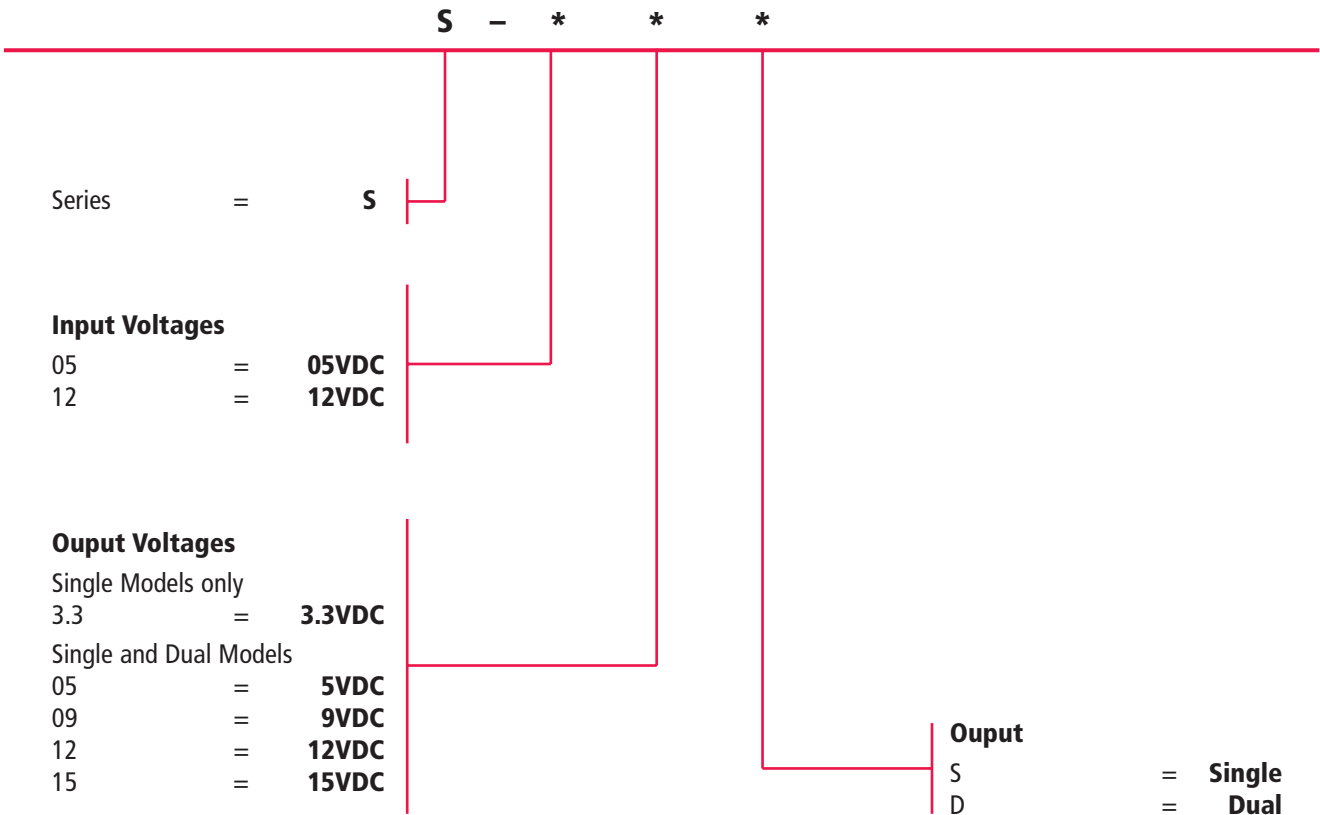
| Pin # | Dual Output |
|-------|-------------|
| 1 | -Vin |
| 2 | +Vin |
| 4 | Common |
| 5 | -Vout |
| 7 | +Vout |
| 10 | NC |

Tolerance:
x.xx = ±0.25mm

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Model Code Information



Ordering Examples: For availability see Selection Guides on pages 28

S-0512S = S-series, 5VDC input, 12VDC output, single output, 1kVDC isolation