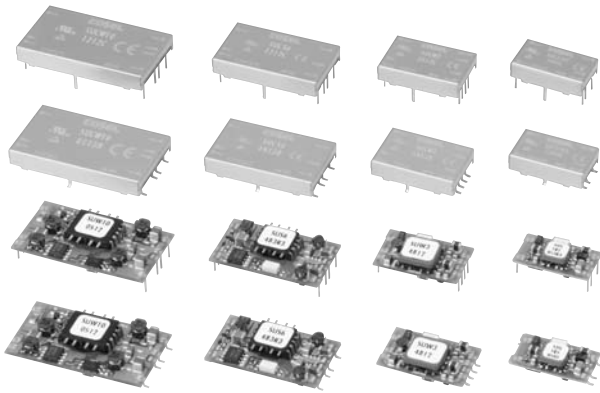


SU Series



- SMD & Through-hole Mounting Options
- High Efficiency - Up to 87%
- High Reliability
- Remote On/Off (Not 1.5 W)
- Overcurrent Protection
- Open Frame & Covered Options
- Input Voltage Ranges from 5 V to 48 V nominal

Specification

Input

| | |
|----------------------------------|----------------|
| Input Voltage Range | • See table |
| Input Current | • See table |
| Input Reverse Voltage Protection | • Not provided |

Output

| | |
|-----------------------------|--|
| Output Voltage | • See table |
| Output Voltage Trim | • $\pm 5\%$ by external resistor |
| Minimum Load | • No minimum load required |
| Line Regulation | • 2% |
| Load Regulation | • 2% |
| Setpoint Accuracy | • Single output: $\pm 3\%$ Dual output: $\pm 5\%$ |
| Start-up Time | • 20 ms (nom. V_{in} max load) |
| Ripple & Noise | • 7% pk-pk max, 20 MHz b/w |
| Overcurrent Protection | • 105% minimum of I_{out} nom with auto recovery |
| Short Circuit Protection | • Trip & restart (Hiccup mode) with auto recovery |
| Remote On/Off | • RC pin, logic low-ON, logic high-OFF, when not in use connect to $-V_{in}$ (not 1.5 W) |
| Recommended Capacitive Load | • 1-100 μF |

General

| | |
|---------------------|---|
| Efficiency | • See table |
| Isolation | • SUS/W models: 500 VDC Input to Output SUCS/W models: 500 VDC Input to Output, 500 VDC Input to Case, 500 VDC Output to Case |
| Switching Frequency | • Variable 200-1950 kHz |
| MTBF | • 1200 kHrs per EIAJ RCR-9102 |

Environmental

| | |
|-----------------------|---|
| Operating Temperature | • $-40^{\circ}C$ to $+85^{\circ}C$ with full power to $+55^{\circ}C$. For derating curves for convection cooling and forced air cooling contact sales. |
| Cooling | • Convection-cooled |
| Operating Humidity | • 20-95% RH, non-condensing |
| Storage Temperature | • $-40^{\circ}C$ to $+100^{\circ}C$ |
| Storage Humidity | • 20-95% RH, non-condensing |
| Operating Altitude | • 3000 m |
| Shock | • 50 g 11ms once along each axis |
| Vibration | • 10-55 Hz, 10 g 3 minute period, 60 minutes along each axis |

EMC & Safety

| | |
|-------------------|---|
| Emissions | • EN55022/FCC level A conducted & radiated* |
| ESD Immunity | • EN61000-4-2, level 4 Perf Criteria A* |
| Radiated Immunity | • EN61000-4-3, level 3 Perf Criteria A* |
| EFT/Burst | • EN61000-4-4, level 4 Perf Criteria A* |
| Surge | • EN61000-4-5, level 3 Perf Criteria A* |
| Safety Approvals | • EN60950-1, C-UL60950-1 |

* Additional filter required, contact sales for details.

Models and Ratings - 1.5/3 Watt

| Input Voltage | Max Power | Output Voltage | Output Current | Input Current | Efficiency (1,2) | Model Number (3) |
|---------------|-----------|----------------|----------------|---------------|------------------|------------------|
| 4.5 - 9 VDC | 1.32 W | 3.3 V | 400 mA | 377 mA | 70% | SUS1R5053R3B |
| | 1.50 W | 5 V | 300 mA | 405 mA | 74% | SUS1R50505B |
| | 1.56 W | 12 V | 130 mA | 422 mA | 74% | SUS1R50512B |
| | 1.50 W | 15 V | 100 mA | 405 mA | 74% | SUS1R50515B |
| | 1.56 W | ±12 V | 65 mA | 433 mA | 72% | SUW1R50512B |
| | 1.50 W | ±15 V | 50 mA | 417 mA | 72% | SUW1R50515B |
| 9 - 18 VDC | 1.32 W | 3.3 V | 400 mA | 153 mA | 72% | SUS1R5123R3B |
| | 1.50 W | 5 V | 300 mA | 164 mA | 76% | SUS1R51205B |
| | 1.56 W | 12 V | 130 mA | 171 mA | 76% | SUS1R51212B |
| | 1.50 W | 15 V | 100 mA | 164 mA | 76% | SUS1R51215B |
| | 1.56 W | ±12 V | 65 mA | 173 mA | 75% | SUW1R51212B |
| | 1.50 W | ±15 V | 50 mA | 167 mA | 75% | SUW1R51215B |
| 18 - 36 VDC | 1.32 W | 3.3 V | 400 mA | 76 mA | 72% | SUS1R5243R3B |
| | 1.50 W | 5 V | 300 mA | 82 mA | 76% | SUS1R52405B |
| | 1.56 W | 12 V | 130 mA | 84 mA | 77% | SUS1R52412B |
| | 1.50 W | 15 V | 100 mA | 81 mA | 77% | SUS1R52415B |
| | 1.56 W | ±12 V | 65 mA | 87 mA | 75% | SUW1R52412B |
| | 1.50 W | ±15 V | 50 mA | 83 mA | 75% | SUW1R52415B |
| 36 - 76 VDC | 1.32 W | 3.3 V | 400 mA | 38 mA | 72% | SUS1R5483R3B |
| | 1.50 W | 5 V | 300 mA | 41 mA | 76% | SUS1R54805B |
| | 1.56 W | 12 V | 130 mA | 42 mA | 77% | SUS1R54812B |
| | 1.50 W | 15 V | 100 mA | 41 mA | 77% | SUS1R54815B |
| | 1.56 W | ±12 V | 65 mA | 43 mA | 75% | SUW1R54812B |
| | 1.50 W | ±15 V | 50 mA | 42 mA | 75% | SUW1R54815B |
| 4.5 - 9 VDC | 1.98 W | 3.3 V | 600 mA | 536 mA | 74% | SUS3053R3B |
| | 3.00 W | 5 V | 600 mA | 780 mA | 77% | SUS30505B |
| | 3.00 W | 12 V | 250 mA | 760 mA | 79% | SUS30512B |
| | 3.00 W | 15 V | 200 mA | 760 mA | 79% | SUS30515B |
| | 3.12 W | ±12 V | 130 mA | 822 mA | 76% | SUW30512B |
| | 3.00 W | ±15 V | 100 mA | 790 mA | 76% | SUW30515B |
| 9 - 18 VDC | 1.98 W | 3.3 V | 600 mA | 218 mA | 76% | SUS3123R3B |
| | 3.00 W | 5 V | 600 mA | 317 mA | 79% | SUS31205B |
| | 3.00 W | 12 V | 250 mA | 309 mA | 81% | SUS31212B |
| | 3.00 W | 15 V | 200 mA | 313 mA | 80% | SUS31215B |
| | 3.12 W | ±12 V | 130 mA | 334 mA | 78% | SUW31212B |
| | 3.00 W | ±15 V | 100 mA | 321 mA | 78% | SUW31215B |
| 18 - 36 VDC | 1.98 W | 3.3 V | 600 mA | 110 mA | 75% | SUS3243R3B |
| | 3.00 W | 5 V | 600 mA | 159 mA | 79% | SUS32405B |
| | 3.00 W | 12 V | 250 mA | 155 mA | 81% | SUS32412B |
| | 3.00 W | 15 V | 200 mA | 157 mA | 80% | SUS32415B |
| | 3.12 W | ±12 V | 130 mA | 167 mA | 78% | SUW32412B |
| | 3.00 W | ±15 V | 100 mA | 161 mA | 78% | SUW32415B |
| 36 - 76 VDC | 1.98 W | 3.3 V | 600 mA | 56 mA | 74% | SUS3483R3B |
| | 3.00 W | 5 V | 600 mA | 80 mA | 79% | SUS34805B |
| | 3.00 W | 12 V | 250 mA | 78 mA | 81% | SUS34812B |
| | 3.00 W | 15 V | 200 mA | 78 mA | 81% | SUS34815B |
| | 3.12 W | ±12 V | 130 mA | 84 mA | 78% | SUW34812B |
| | 3.00 W | ±15 V | 100 mA | 81 mA | 78% | SUW34815B |

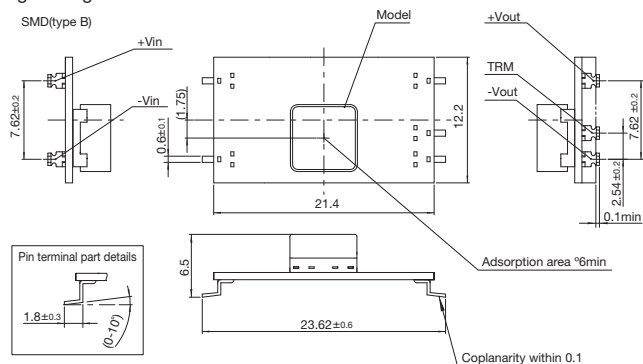
Notes

- Cover versions available for all products and the efficiency reduces by 2%.
- At rated input and full load.
- To order covered versions, insert a 'C' after the 'SU' in the part number e.g. SUCS1R52405B.

Mechanical Details

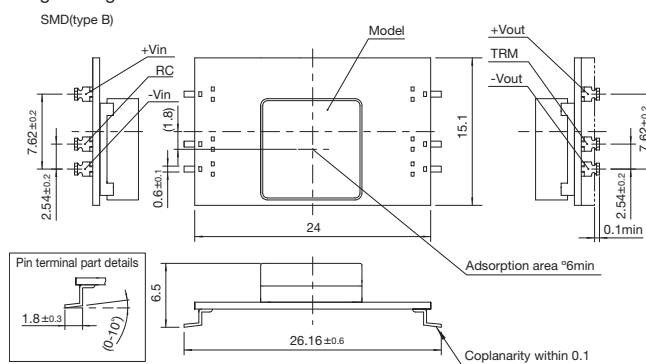
SUS/W1R5

Weight: <2 g



SUS/W3

Weight: <3 g



Notes

- All measurements are in mm.
- Tolerance: ±0.5 mm.
- Contact sales for SUCS and SUCW mechanical details.
- Change 'B' in part number to 'C' for PCB mount option.

Models and Ratings - 6 Watt

| Input Voltage | Max Power | Output Voltage | Output Current | Input Current | Efficiency (1,2) | Model Number (3) |
|---------------|-----------|----------------|----------------|---------------|------------------|------------------|
| 4.5 - 9 VDC | 3.96 W | 3.3 V | 1200 mA | 1100 mA | 72% | SUS6053R3B |
| | 5.00 W | 5 V | 1000 mA | 1316 mA | 76% | SUS60505B |
| | 6.00 W | 12 V | 500 mA | 1500 mA | 80% | SUS60512B |
| | 6.00 W | 15 V | 400 mA | 1500 mA | 80% | SUS60515B |
| | 6.00 W | ±12 V | 250 mA | 1538 mA | 78% | SUW60512B |
| | 6.00 W | ±15 V | 200 mA | 1538 mA | 78% | SUW60515B |
| 9 - 18 VDC | 4.46 W | 3.3 V | 1350 mA | 502 mA | 74% | SUS6123R3B |
| | 6.00 W | 5 V | 1200 mA | 617 mA | 81% | SUS61205B |
| | 6.00 W | 12 V | 500 mA | 588 mA | 85% | SUS61212B |
| | 6.00 W | 15 V | 400 mA | 588 mA | 85% | SUS61215B |
| | 6.00 W | ±12 V | 250 mA | 588 mA | 85% | SUW61212B |
| | 6.00 W | ±15 V | 200 mA | 588 mA | 85% | SUW61215B |
| 18 - 36 VDC | 4.46 W | 3.3 V | 1350 mA | 248 mA | 75% | SUS6243R3B |
| | 6.00 W | 5 V | 1200 mA | 309 mA | 81% | SUS62405B |
| | 6.00 W | 12 V | 500 mA | 291 mA | 86% | SUS62412B |
| | 6.00 W | 15 V | 400 mA | 291 mA | 86% | SUS62415B |
| | 6.00 W | ±12 V | 250 mA | 291 mA | 86% | SUW62412B |
| | 6.00 W | ±15 V | 200 mA | 291 mA | 86% | SUW62415B |
| 36 - 76 VDC | 4.46 W | 3.3 V | 1350 mA | 121 mA | 77% | SUS6483R3B |
| | 6.00 W | 5 V | 1200 mA | 154 mA | 81% | SUS64805B |
| | 6.00 W | 12 V | 500 mA | 145 mA | 86% | SUS64812B |
| | 6.00 W | 15 V | 400 mA | 145 mA | 86% | SUS64815B |
| | 6.00 W | ±12 V | 250 mA | 145 mA | 86% | SUW64812B |
| | 6.00 W | ±15 V | 200 mA | 145 mA | 86% | SUW64815B |

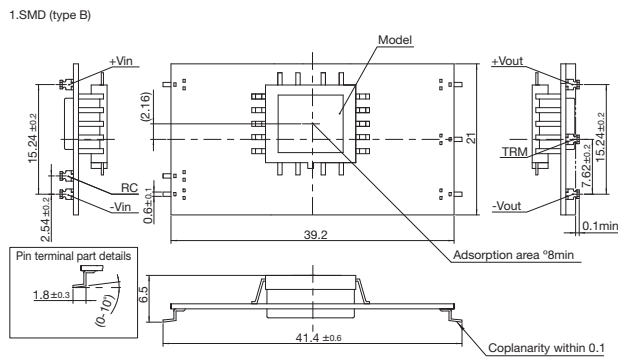
Notes

- Cover versions available for all products and the efficiency reduces by 2%.
- At rated input and full load.
- To order covered versions, insert a 'C' after the 'SU' in the part number e.g. SUCS62405B.
- Change 'B' in part number for 'C' for PCB mount option.

Mechanical Details

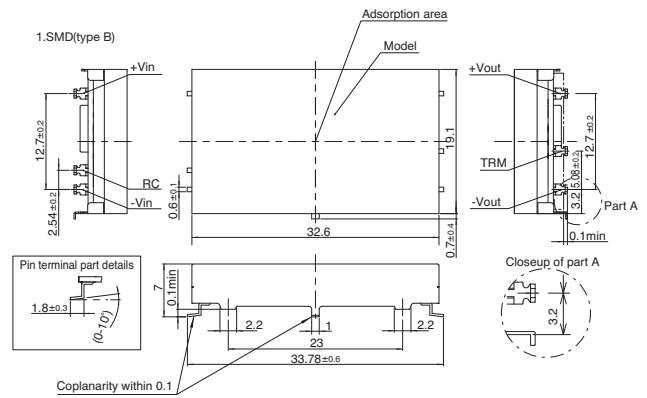
SUS/W6

Weight: <4 g

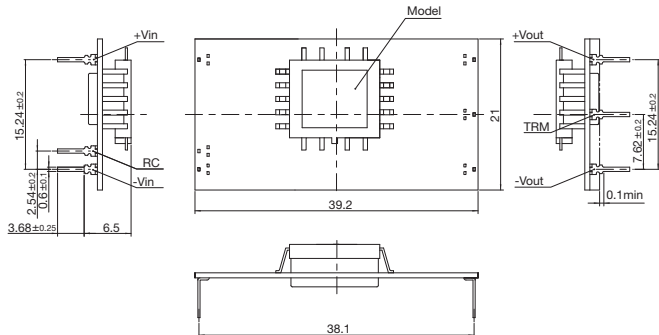


SUCS/W6

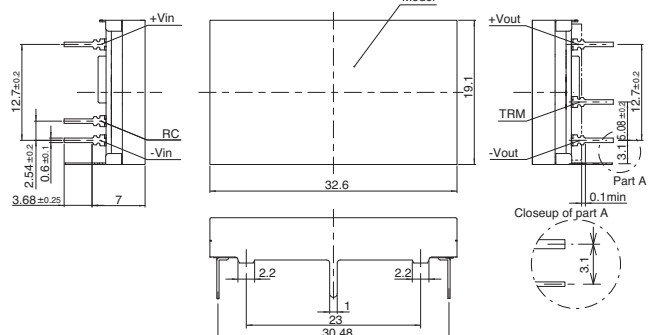
Weight: <7 g



2.DIP (type C)



2.DIP (type C)



Notes

- All measurements are in mm.
- Tolerance: ±0.5 mm..

Models and Ratings - 10 Watt

| Input Voltage | Max Power | Output Voltage | Output Current | Input Current | Efficiency ^(1,2) | Model Number ⁽³⁾ |
|---------------|-----------|----------------|----------------|---------------|-----------------------------|-----------------------------|
| 4.5 - 9 VDC | 8.58 W | 3.3 V | 2600 mA | 2120 mA | 81% | SUS10053R3B |
| | 10.00 W | 5 V | 2000 mA | 2410 mA | 83% | SUS100505B |
| | 10.80 W | 12 V | 900 mA | 2540 mA | 85% | SUS100512B |
| | 10.50 W | 15 V | 700 mA | 2470 mA | 85% | SUS100515B |
| | 10.80 W | ±12 V | 450 mA | 2510 mA | 86% | SUW100512B |
| | 10.50 W | ±15 V | 350 mA | 2440 mA | 86% | SUW100515B |
| 9 - 18 VDC | 8.58 W | 3.3 V | 2600 mA | 872 mA | 82% | SUS10123R3B |
| | 10.00 W | 5 V | 2000 mA | 980 mA | 85% | SUS101205B |
| | 12.00 W | 12 V | 1000 mA | 1150 mA | 87% | SUS101212B |
| | 12.00 W | 15 V | 800 mA | 1150 mA | 87% | SUS101215B |
| | 10.80 W | ±12 V | 450 mA | 1050 mA | 86% | SUW101212B |
| | 10.50 W | ±15 V | 350 mA | 1020 mA | 86% | SUW101215B |
| 18 - 36 VDC | 8.58 W | 3.3 V | 2600 mA | 436 mA | 82% | SUS10243R3B |
| | 10.00 W | 5 V | 2000 mA | 490 mA | 85% | SUS102405B |
| | 12.00 W | 12 V | 1000 mA | 575 mA | 87% | SUS102412B |
| | 12.00 W | 15 V | 800 mA | 575 mA | 87% | SUS102415B |
| | 10.80 W | ±12 V | 450 mA | 523 mA | 86% | SUW102412B |
| | 10.50 W | ±15 V | 350 mA | 509 mA | 86% | SUW102415B |
| 36 - 76 VDC | 8.58 W | 3.3 V | 2600 mA | 218 mA | 82% | SUS10483R3B |
| | 10.00 W | 5 V | 2000 mA | 245 mA | 85% | SUS104805B |
| | 12.00 W | 12 V | 1000 mA | 287 mA | 87% | SUS104812B |
| | 12.00 W | 15 V | 800 mA | 287 mA | 87% | SUS104815B |
| | 10.80 W | ±12 V | 450 mA | 262 mA | 86% | SUW104812B |
| | 10.50 W | ±15 V | 350 mA | 254 mA | 86% | SUW104815B |

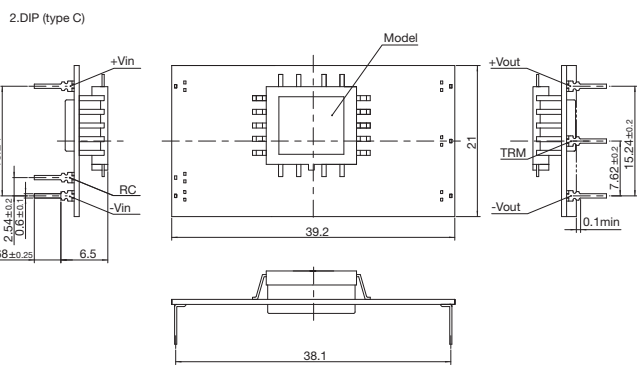
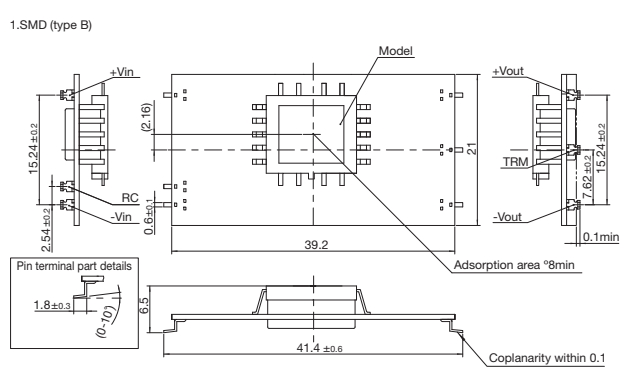
Notes

- Cover versions available for all products and the efficiency reduces by 2%.
- At rated input and full load.
- To order covered versions, insert a 'C' after the 'SU' in the part number e.g. SUCS102405B.
- Change 'B' in part number for 'C' for PCB mount option.

Mechanical Details

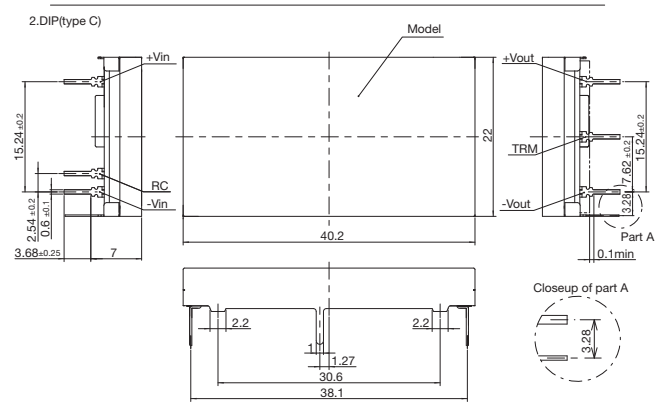
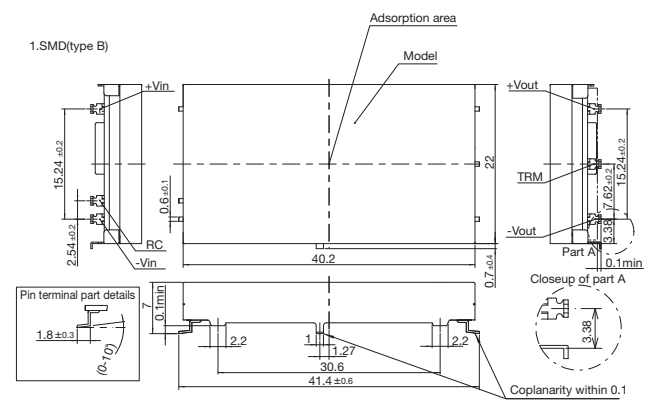
SUS/W10

Weight: <6 g



SUCS/W10

Weight: <10 g



Notes

- All measurements are in mm.
- Tolerance: ±0.5 mm..

