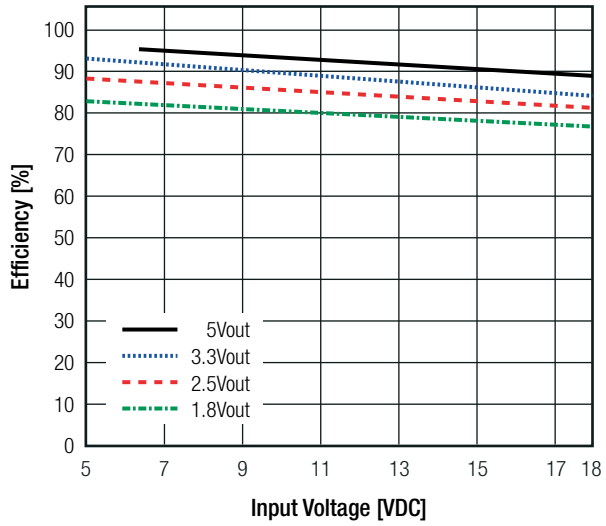
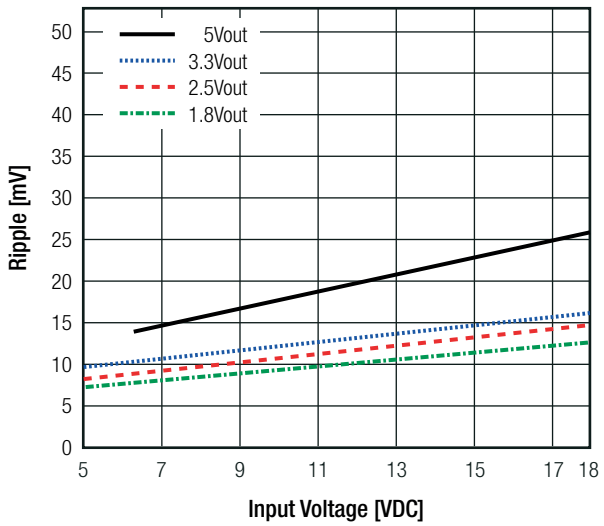
## Specifications (measured @ Ta= 25°C, 10% minimum load, unless otherwise stated)

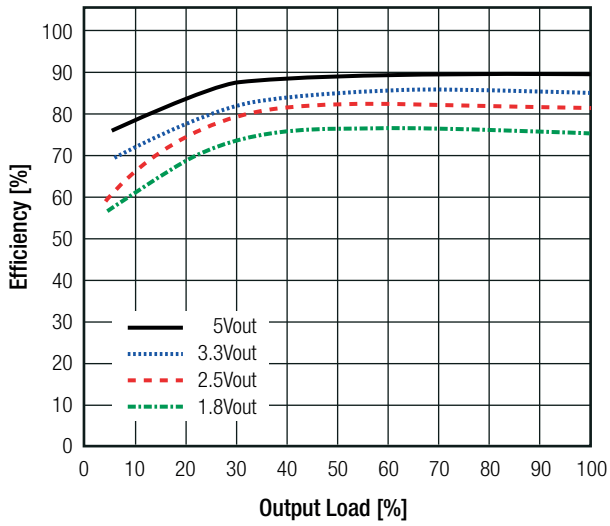
### Efficiency vs. Vin (full load)



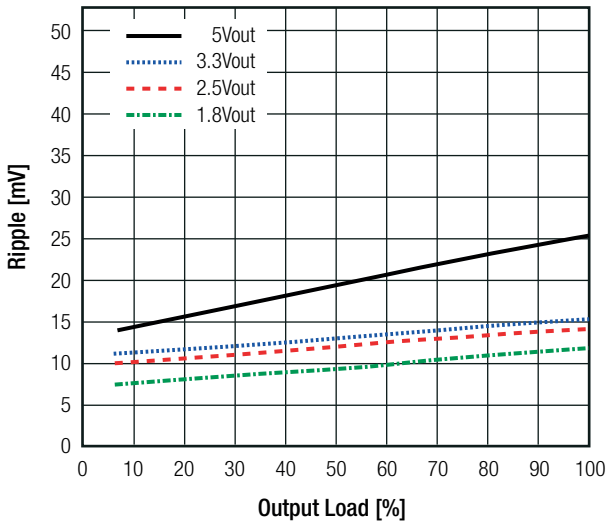

### Ripple vs. Vin (full load)



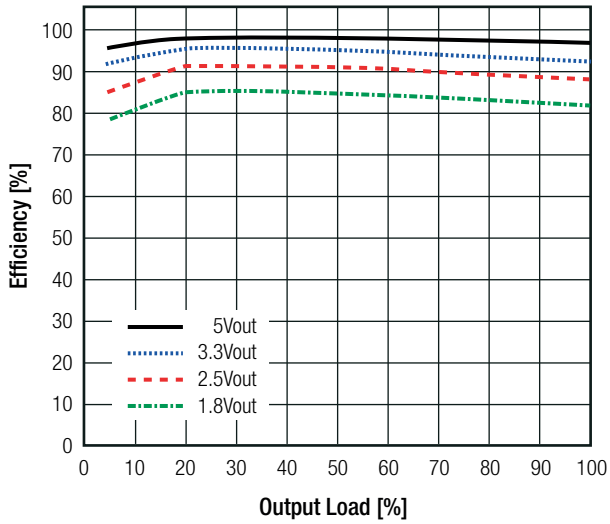

### Efficiency vs. Load (max. Vin)



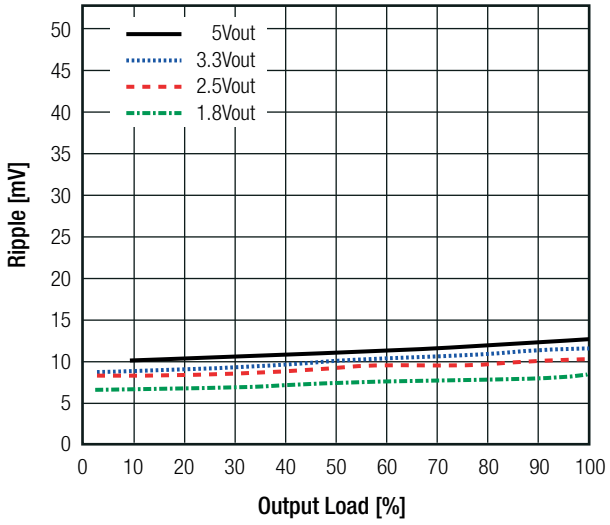

### Ripple vs. Load (max. Vin)




### Efficiency vs. Load (min. Vin)




### Ripple vs. Load (min. Vin)



## Specifications (measured @ Ta= 25°C, 10% minimum load, unless otherwise stated)

### REGULATIONS

| Parameter | Condition | Value |
|---|---|---|
| Output Accuracy | 100% load | ±2.0% typ / ±3.0% max. |
| Line Regulation | low line to high line, 100% load | ±0.2% typ. / ±0.4% max. |
| Load Regulation | 10% to 100% load | ±0.4% typ. / ±0.6% max. |
| Transient Response | 100% <-> 50% load | ±85mV typ. / ±100mV max. |

### PROTECTIONS

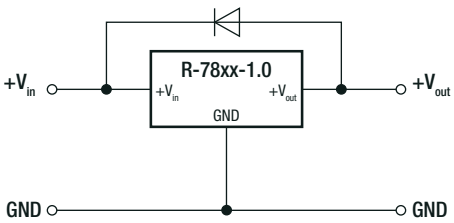
| Parameter | Condition | Value |
|---|---|---|
| Short Circuit Protection (SCP) | | continuous, automatic recovery |
| Short Circuit Input Current | nom. Vin= 12VDC | 100mA max. |

#### Optional Diode Protection Circuit

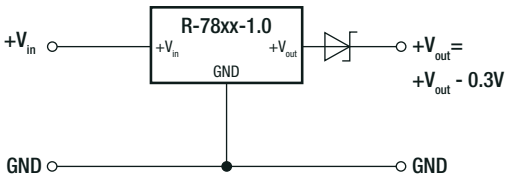
Add a blocking diode to Vout if current can flow backwards into the output, as this can damage the converter when it is powered down.

The diode can either be fitted across the device if the source is low impedance or fitted in series with the output (recommended).

**Optional Protection 1:**



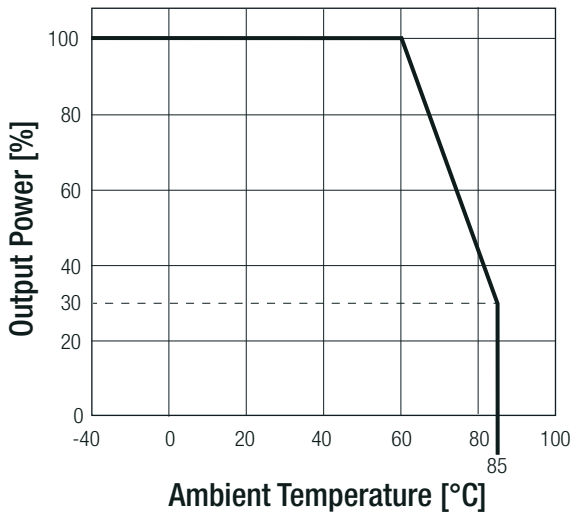

**Optional Protection 2:**




### ENVIRONMENTAL

| Parameter | Condition | | Value |
|---|---|---|---|
| Operating Temperature Range | with derating (see graph) | | -40°C to +85°C |
| Maximum Case Temperature | | | +100°C |
| Temperature Coefficient | | | ±0.015%/K |
| Thermal Impedance | 0.1m/s, vertical | | 70K/W |
| Operating Altitude | | | 2000m |
| Operating Humidity | non-condesing | | 95% RH max. |
| Pollution Degree | | | PD2 |
| MTBF | according to MIL-HDBK-217F, G.B. | +25°C<br>+71°C | 13338 x $10^3$ hours<br>3880 x $10^3$ hours |

#### Derating Graph



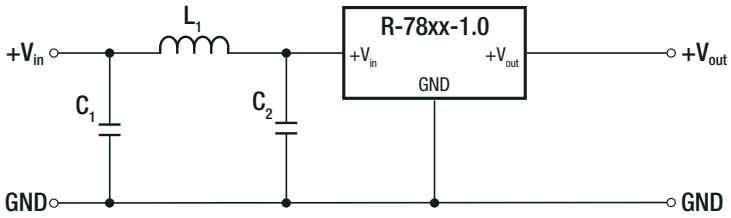
## Specifications (measured @ Ta= 25°C, 10% minimum load, unless otherwise stated)

### SAFETY AND CERTIFICATIONS

| Certificate Type (Safety) | Report / File Number | Standard |
|---|---|---|
| Information Technology Equipment, General Requirements for Safety | 1603123 | IEC60950-1:2005, 2nd Edition + AM 2:2013<br>EN60950-1:2006 + AM 2:2013 |
| EAC | RU-AT.49.09571 | TP TC 004/2011 |
| RoHs 2+ | | RoHS 2011/65/EU + AM2015/863 |

| EMC Compliance | Condition | Standard / Criterion |
|---|---|---|
| Electromagnetic compatibility of multimedia equipment - Emission requirements | with external filter (see filter suggestion below) | EN55032, Class A and B |
| ESD Electrostatic discharge immunity test | Contact ±6kV | EN61000-4-2, Criteria A |
| Radiated, radio-frequency, electromagnetic field immunity test | 3V/m | EN61000-4-3, Criteria A |
| Fast Transient and Burst Immunity | ±1.0kV | EN61000-4-4, Criteria A |
| Immunity to conducted disturbances, induced by radio-frequency fields | 3V | EN61000-4-6, Criteria A |
| Power Magnetic Field Immunity | 50Hz, 3A/m | EN61000-4-8, Criteria A |

**EMC Filter Suggestion according to EN55032**




**Component List Class A**

| MODEL | C1 | L1 |
|---|---|---|
| R-783.3-1.0 | 10µF 100V MLCC | 3.9µH choke RLS-397 |
| R-785.0-1.0 | | |

**Component List Class B**

| MODEL | C1 | C2 | L1 |
|---|---|---|---|
| R-783.3-1.0 | 10µF 100V MLCC | 2.2µF 100V MLCC | 5.6µH choke RLS-567 |
| R-785.0-1.0 | | | |

**Notes:**

Note2: Filter suggestions are valid for indicated part numbers only. For other part numbers, please contact RECOM tech support for advice

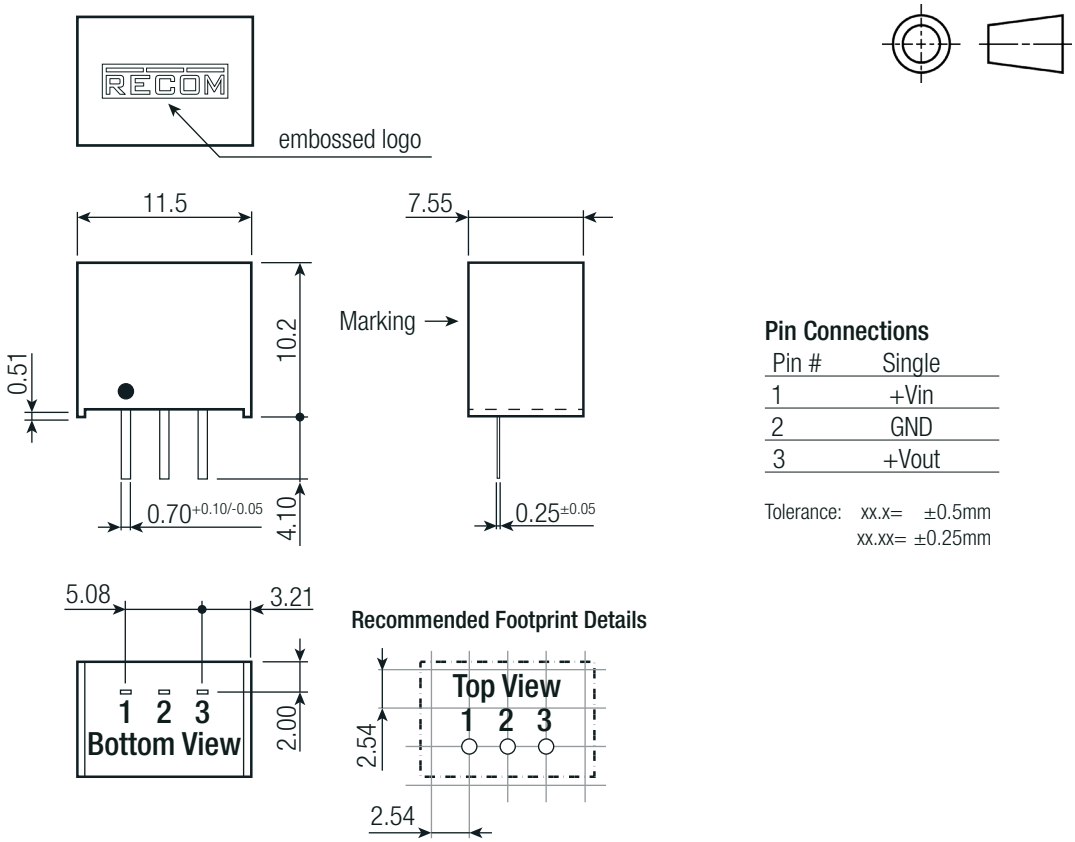
### DIMENSION AND PHYSICAL CHARACTERISTICS

| Parameter | Type | Value |
|---|---|---|
| Material | case<br>potting<br>PCB | non-conductive black plastic, (UL94 V-0)<br>silicone, (UL94 V-0)<br>FR4, (UL94 V-0) |
| Package Dimension (LxWxH) | | 11.5 x 7.55 x 10.2mm |
| Package Weight | | 1.9g typ. |

continued on next page

## Specifications (measured @ Ta= 25°C, 10% minimum load, unless otherwise stated)

### Dimension Drawing (mm)



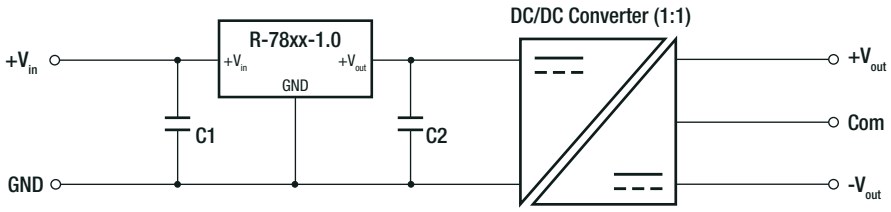

**Pin Connections**

| Pin # | Single |
|---|---|
| 1 | +Vin |
| 2 | GND |
| 3 | +Vout |

Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

## INSTALLATION AND APPLICATION

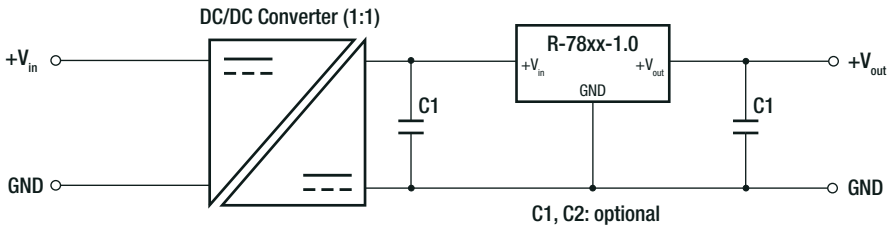
### High Efficiency, Isolated, Dual Unregulated Output




C1: optional
C2: required (further decoupling filtering may be necessary between the two converters)

- Medical grade isolated dual outputs
- Wide input range 6.5V to 18V
- High efficiency, suitable for 12V battery powered devices

### Isolated (up to 6kVDC), Wide Input Range Regulated Output




C1, C2: optional

- High isolation voltage
- Improved load / line Regulation
- Wide input voltage
- Point-of-load architecture

## Specifications (measured @ Ta= 25°C, 10% minimum load, unless otherwise stated)

| PACKAGING INFORMATION | | |
|---|---|---|
| **Parameter** | **Type** | **Value** |
| Packaging Dimension (LxWxH) | tube | 520.0 x 9.3 x 16.5mm |
| Packaging Quantity | tube | 42pcs |
| Storage Temperature Range | | -55°C to +125°C |
| Storage Humidity | | 95% RH max. |