

## Features

### Regulated Converters

- 7.5W DIP24 Package
- 1kVDC, 2kVDC and 3kVDC Isolation Options
- Approved for Medical Applications (/H3)
- UL and EN Safety Approvals
- Continuous Short Circuit Protection (power limiting)
- 5 Side Shielded Metal Case
- Full SMD design
- 2 Case Style Options
- Remote Pin Option
- Efficiency to 86 %

### Description

The REC7.5-xxxxSRW/DRW-series offer single and dual regulated outputs in a DIP24 package with 1kV, 2kV or 3kV options and are suitable for higher power industrial or medical applications. Remote on/off control is possible with the /CTRL option and SMD pinning is offered with the /SMD option. The converters can deliver 140% rated power for short periods of time to cope with applications with large capacitive loads or high start up currents.

### Selection Guide

| Part Number            | Input Voltage (VDC) | Output Voltage (VDC) | Output Current (mA) | Efficiency (%) | Max. Cap. Load |
|------------------------|---------------------|----------------------|---------------------|----------------|----------------|
| REC7.5-xx3.3SRW/H*/A/M | 9-18, 18-36, 36-72  | 3.3                  | 1800                | 78             | 3300µF         |
| REC7.5-xx05SRW/H*/A/M  | 9-18, 18-36, 36-72  | 5                    | 1500                | 79-82          | 2200µF         |
| REC7.5-xx09SRW/H*/A/M  | 9-18, 18-36, 36-72  | 9                    | 833                 | 81-84          | 680µF          |
| REC7.5-xx12SRW/H*/A/M  | 9-18, 18-36, 36-72  | 12                   | 625                 | 82-85          | 330µF          |
| REC7.5-xx15SRW/H*/A/M  | 9-18, 18-36, 36-72  | 15                   | 500                 | 83-86          | 220µF          |
| REC7.5-xx05DRW/H*/A/M  | 9-18, 18-36, 36-72  | ±5                   | ±750                | 79-82          | ±1000µF        |
| REC7.5-xx09DRW/H*/A/M  | 9-18, 18-36, 36-72  | ±9                   | ±417                | 81-84          | ±330µF         |
| REC7.5-xx12DRW/H*/A/M  | 9-18, 18-36, 36-72  | ±12                  | ±312                | 82-85          | ±160µF         |
| REC7.5-xx15DRW/H*/A/M  | 9-18, 18-36, 36-72  | ±15                  | ±250                | 83-86          | ±100µF         |

2:1

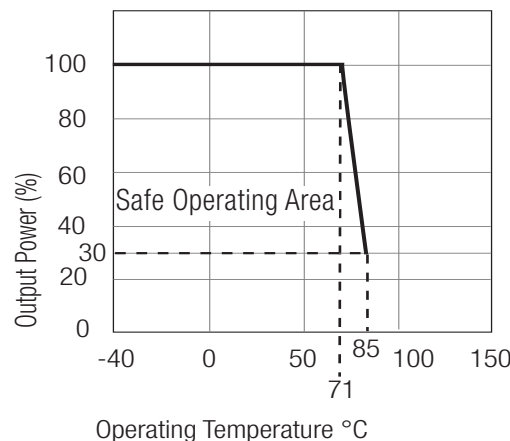
xx = 9-18Vin = 12V,  
xx = 18-36Vin = 24,  
xx = 36-72Vin = 48

- \* add suffix /H1 for 1kVDC Isolation, /H2 for 2kVDC isolation or /H3 for 3kVDC Isolation (not available in H3/A/M/SMD combination)
- \* add suffix "/SMD" for SMD package, e.g. REC7.5-2405DRW/H1/A/M/SMD
- \* add suffix "/CTRL" for Remote Pin option
- \* add suffix -R for Tape and Reel packaging
- \* no plastic case is available for REC7.5

### Derating

## Derating-Graph

(Ambient Temperature)



**ECONOLINE**

DC/DC-Converter

**RECOM**

## 7.5 Watt DIP24 & SMD Single & Dual Output



**E-224736**



**EN-60950-1 Certified**  
**EN-60601-1 Certified**  
**(Suffix H3)**  
**UL-60950-1 Certified**

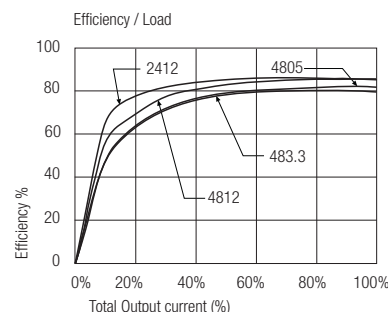
**REC 7.5**

Refer to Application Notes

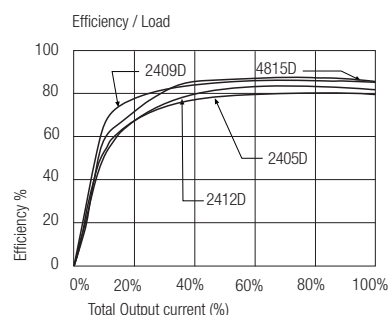
**Specifications** (measured at  $T_A = 25^\circ\text{C}$ , nominal input voltage, full load and after warm-up)

|                                                                             |                               |                                                              |                                              |
|-----------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|----------------------------------------------|
| Input Voltage Range                                                         |                               |                                                              | 2:1                                          |
| Output Voltage Accuracy                                                     |                               |                                                              | ±2% max.                                     |
| Line Voltage Regulation                                                     |                               |                                                              | 0.4% max.                                    |
| Load Voltage Regulation (25% to 100% full load )                            |                               |                                                              | 0.8% max.                                    |
| Output Ripple and Noise (at 20MHz BW)                                       | 3.3V output type              | 100mVp-p max.                                                |                                              |
|                                                                             | 5, 9, 12 and 15V output types | 50mVp-p max.                                                 |                                              |
| Operating Frequency (Full Load)                                             |                               |                                                              | 150kHz min. / 240kHz max.                    |
| Input Filter                                                                |                               |                                                              | PI Network                                   |
| Efficiency at Full Load                                                     |                               |                                                              | see Selection Guide                          |
| No Load Power Consumption                                                   |                               |                                                              | 300mW max.                                   |
| Isolation Voltage                                                           | H1 types                      | (tested for 1 second)                                        | 1000VDC min.                                 |
| Isolation Voltage                                                           | H2 types                      | (tested for 1 second)                                        | 2000VDC min.                                 |
| Isolation Voltage                                                           | H3 types                      | (tested for 1 second)                                        | 3000VDC min.                                 |
| Rated Working Voltage                                                       | (long term isolation)         |                                                              | see Application Note                         |
| Isolation Capacitance                                                       |                               |                                                              | 50pFtyp.                                     |
| Isolation Resistance                                                        |                               |                                                              | 1 GΩ min.                                    |
| Short Circuit Protection (Max temp. = 50°C during short circuit conditions) |                               |                                                              | Continuous, Auto Restart                     |
| Operating Temperature Range (free air convection)                           |                               |                                                              | -40°C to +71°C (see Graph)                   |
| Storage Temperature Range                                                   |                               |                                                              | -55°C to +125°C                              |
| Relative Humidity                                                           |                               |                                                              | 95% RH                                       |
| Case Material                                                               |                               |                                                              | Nickel Plated Metal with Non-Conductive Base |
| Thermal Impedance                                                           |                               |                                                              | Natural convection 12°C/W                    |
| Package Weight                                                              |                               |                                                              | 16g                                          |
| Packing Quantity                                                            |                               |                                                              | 15 pcs per Tube<br>100 pcs per Reel          |
| MTBF (+25°C) }<br>(+71°C) }                                                 |                               | Detailed Information see<br>Application Notes chapter "MTBF" |                                              |
|                                                                             |                               | using MIL-HDBK 217F                                          | 800 x 10³hours                               |
|                                                                             |                               | using MIL-HDBK 217F                                          | >200 x 10³hours                              |
| Certifications                                                              |                               |                                                              | UL General Safety Report: E248550            |
|                                                                             |                               |                                                              | UL 60950-1 1st Ed.<br>C22.2 No. 60950-1-03   |
|                                                                             |                               |                                                              | EN General Safety Report: LVD-2K05230        |
|                                                                             |                               |                                                              | EN60950-1:2001                               |
|                                                                             |                               |                                                              | EN Medical Safety Report: ETS-060065         |
|                                                                             |                               |                                                              | EN60601-1:1988 + A1: 1991 + A2: 1995         |

## Single

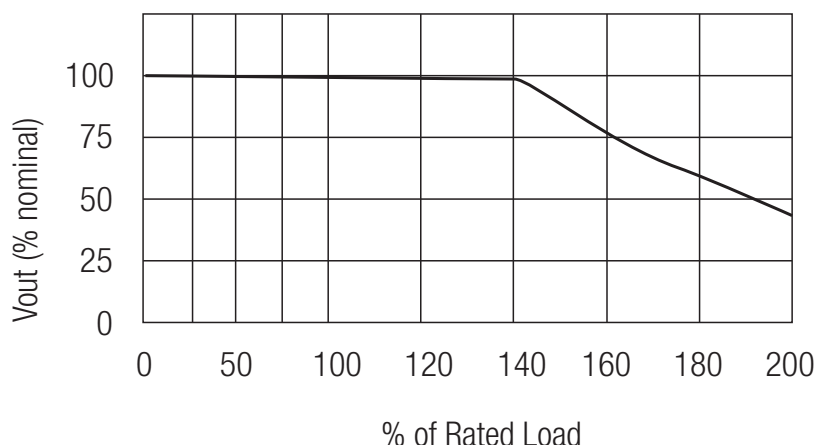


## Dual



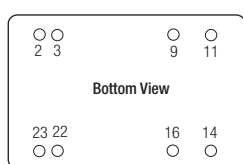
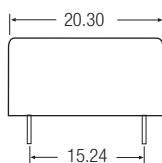
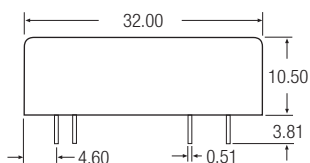
## Typical Characteristics

### Overload Response

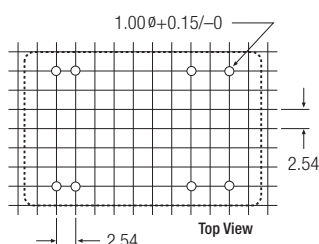




24 PIN DIP Package



Recommended Footprint Details



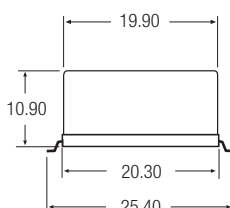
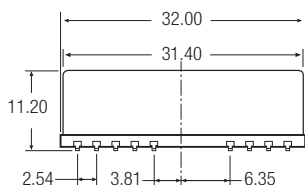
Pin Connections DIP24

| Pin #       | Single | Dual  |
|-------------|--------|-------|
| 1(Optional) | CTRL   | CTRL  |
| 2           | -Vin   | -Vin  |
| 3           | -Vin   | -Vin  |
| 9           | NC     | Com   |
| 11          | NC     | -Vout |
| 14          | +Vout  | +Vout |
| 16          | -Vout  | Com   |
| 22          | +Vin   | +Vin  |
| 23          | +Vin   | +Vin  |

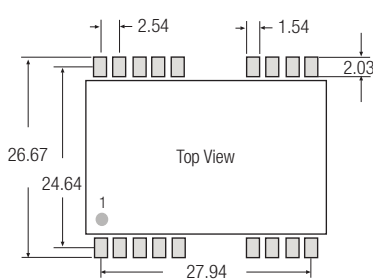
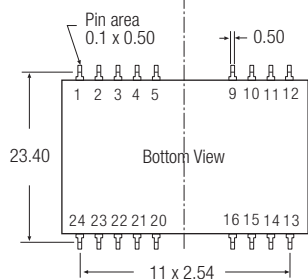
XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

24 PIN SMD Package

/H3/A/M/SMD combination is not allowed



Recommended Footprint Details



Pin Connections DIP24 SMD

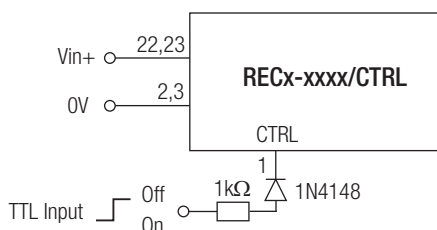
| Pin #          | Single | Dual  |
|----------------|--------|-------|
| 1(Optional)    | CTRL   | CTRL  |
| 2              | -Vin   | -Vin  |
| 3              | -Vin   | -Vin  |
| 9              | NC     | Com   |
| 11             | NC     | -Vout |
| 14             | +Vout  | +Vout |
| 16             | -Vout  | Com   |
| 22             | +Vin   | +Vin  |
| 23             | +Vin   | +Vin  |
| 1,4,5,10,12    | NC     |       |
| 13,15,20,21,24 | NC     |       |

NC = No Connection

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

## CTRL Option

ON = Open or  $0V < V_{ctrl} < 1.2V$   
OFF =  $2.2V < V_{ctrl} < 12V$





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.