

Features

Regulated Converters

Rev.0

- 7.5W DIP24 Package
- 1KVDC, 2KVDC and 3kVDC Isolation Options
- Approved for Medical Applications (/H3)
- UL and EN Safety Approvals
- Continuous Short Circuit Protection
- 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.

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)

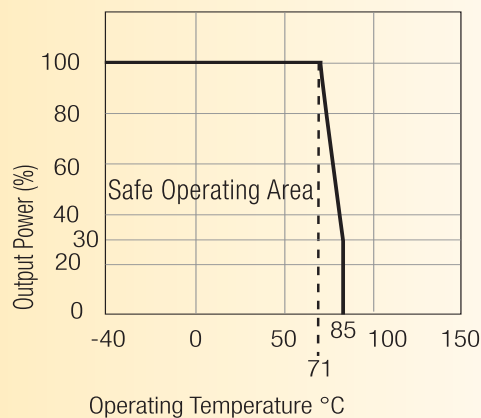
* add suffix "/SMD" for SMD package, e.g. REC7.5-2405DRW/H1/A/M/SMD

* add suffix "/CTRL" for Remote Pin option

* no plastic case is available for REC7.5

Derating

Derating-Graph (Ambient Temperature)

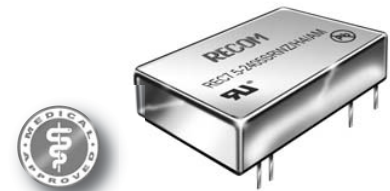


ECONOLINE

DC/DC-Converter

REC7.5- S_DRW/H* /A/M Series

7.5 Watt DIP24 & SMD Single & Dual Output



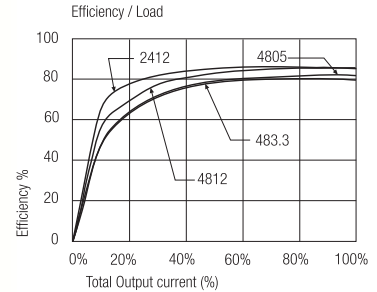
EN-60950-1 Certified
EN-60601-1 Certified
(Suffix H3)
UL-60950-1 Certified

RECOM

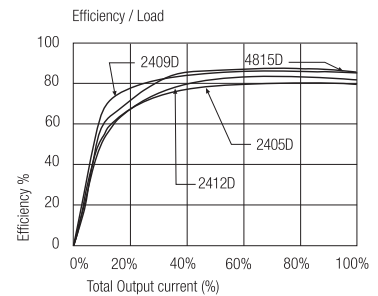
Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage, full load and after warm-up)

Input Voltage Range	2:1		
Output Voltage Accuracy	$\pm 2\%$ 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			
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 G Ω min.		
Short Circuit Protection	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		
Package Weight	16g		
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	800 x 10 ³ hours
(+71°C)		using MIL-HDBK 217F	>200 x 10 ³ hours

Single

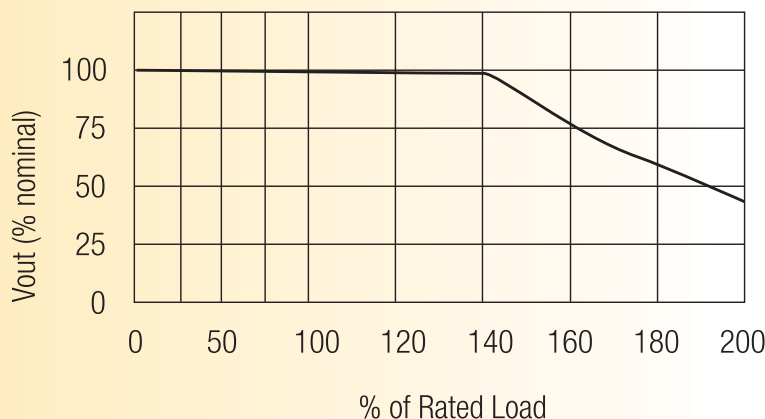


Dual



Typical Characteristics

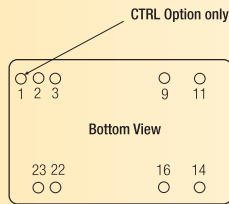
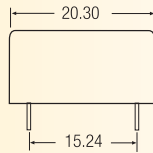
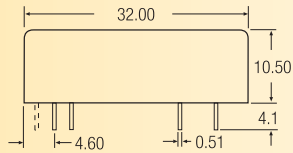
Overload Response



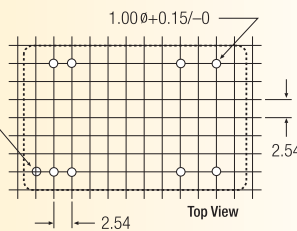
Package Style and Pinning (mm) Wide Input 2:1



24 PIN DIP Package



Recommended Footprint Details

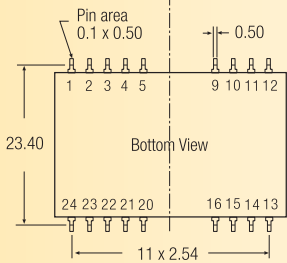
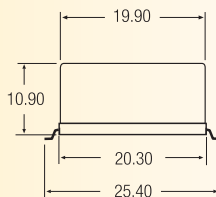
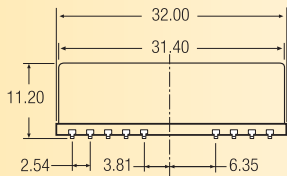


Pin Connections DIP24

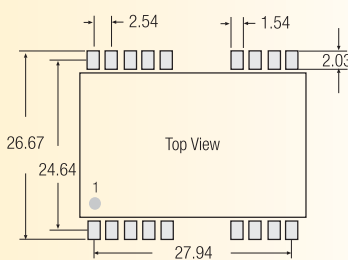
Pin #	Single	Dual
1 (Option)	CTRL	CTRL
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22	+Vin	+Vin
23	+Vin	+Vin

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

24 PIN SMD Package



Recommended Footprint Details



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

Pin Connections DIP24 SMD

Pin #	Single	Dual
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 = $2.2V < V_{ctrl} < 12V$

