

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-xxxSRW/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

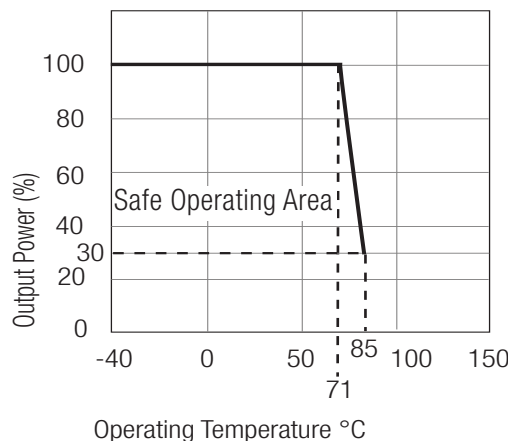
xx = 9-18Vin = 12V,
xx = 18-36Vin = 24,
xx = 36-72Vin = 48

- * 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



7.5 Watt DIP24 & SMD Single & Dual Output



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

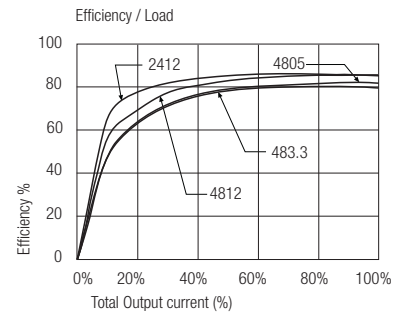
REC 7.5

Refer to Application Notes

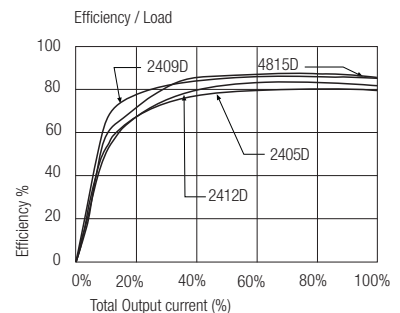
Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage, full load and after warm-up)

Input Voltage Range	2:1		
Output Voltage Accuracy	$\pm 2\%$ 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	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 G Ω 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
			100 pcs per Reel
MTBF (+25°C)	} Detailed Information see	using MIL-HDBK 217F	800 x 10 ³ hours
		using MIL-HDBK 217F	>200 x 10 ³ hours
Certifications	} Application Notes chapter "MTBF"	UL General Safety Report: E248550	
		UL 60950-1 1st Ed. 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



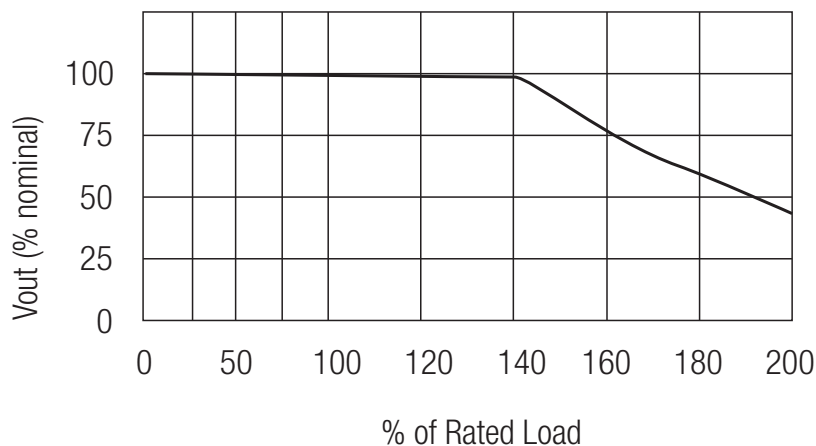
Dual



REC7.5

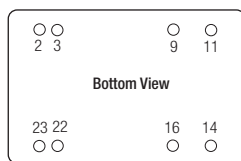
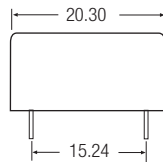
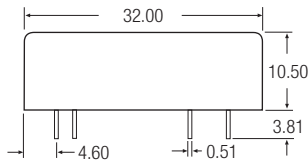
Typical Characteristics

Overload Response

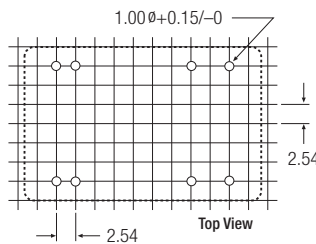




24 PIN DIP Package



Recommended Footprint Details



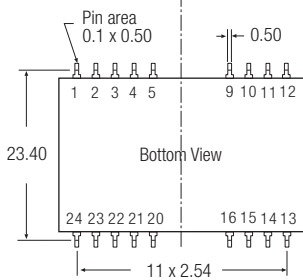
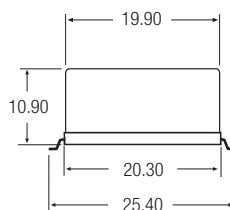
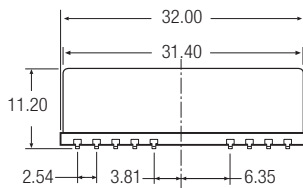
Pin Connections DIP24

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

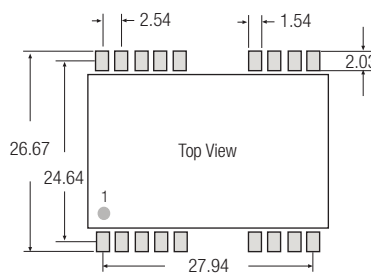
XX.X ± 0.5 mm
XX.XX ± 0.25 mm

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	NC
13,15,20,21,24	NC	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 = $2.2V < V_{ctrl} < 12V$

