Features

Regulated Converters

- 8W DIP24 Package
- 2KVDC and 3kVDC Isolation Options
- 2:1 and 4:1 Versions
- Continuous Short Circuit Protection (power limiting)
- Synchronous Rectification on 3.3, 5V outputs
- Full SMD internal design
- Through Hole or SMD Pinning Options
- Remote Control Pin
- Efficiency to 87%

Description

The REC8-xxxxSRW/DRW-series offer single and dual regulated outputs in a DIP24 package with 2kV or 3kV isolation options and are suitable for higher power industrial or medical applications. Remote on/off control is standard and SMD pinning is offered with the /SMD option.
The converters can deliver 150% 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. Capacitive Load
REC8-xx3.3SRW/H*/A/M	4.5-9, 9-18, 18-36, 36-75	3.3	1600	83-85	2200µF
REC8-xx05SRW/H*/A/M	4.5-9, 9-18, 18-36, 36-75	5	1600	85-87	2200µF
REC8-xx12SRW/H*/A/M	4.5-9, 9-18, 18-36, 36-75	12	666	84-86	470µF
REC8-xx15SRW/H*/A/M	4.5-9, 9-18, 18-36, 36-75	15	533	84-86	220µF
REC8-xx05DRW/H*/A/M	9-18, 18-36, 36-75	±5	±800	84	±1000µF
REC8-xx12DRW/H*/A/M	4.5-9, 9-18, 18-36, 36-75	±12	±333	84-86	±220µF
REC8-xx15DRW/H*/A/M	4.5-9, 9-18, 18-36, 36-75	±15	±267	84-86	±100µF
REC8-xx3.3SRWZ/H*/A/M	9-36, 18-75	3.3	1600	84	2200µF
REC8-xx05SRWZ/H*/A/M	9-36, 18-75	5	1600	86	2200µF
REC8-xx12SRWZ/H*/A/M	9-36, 18-75	12	666	85	470µF
REC8-xx15SRWZ/H*/A/M	9-36, 18-75	15	533	85	220µF
REC8-xx05DRWZ/H*/A/M	9-36, 18-75	±5	±800	83	±1000µF
REC8-xx12DRWZ/H*/A/M	9-36, 18-75	±12	±333	85	±220µF
REC8-xx15DRWZ/H*/A/M	9-36, 18-75	±15	±267	85	±100µF

* Standard is /H2 for 2kVDC isolation, use /H3 for 3kVDC Isolation (not SMD)
* add suffix "/SMD" for SMD package, e.g. REC8-2405SRW/H2/A/M/SMD
* add suffix -R for Tape and Reel packaging (only available for SMD package) e.g. REC8-2405SRW/H2/A/M/SMD-R

2:1
xx = 4.5-9Vin = 05,
xx = 9-18Vin = 12,
xx = 18-36Vin = 24,
xx = 36-75Vin = 48

4:1
xx = 9-36Vin = 24,
xx = 18-75Vin = 48

Specifications (measured at T_A = 25°C, nominal input voltage, full load and after warm-up)

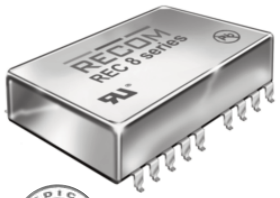
Input Voltage Range		2:1 & 4:1
Input Filter		PI Network
Output Voltage Accuracy		±1.5% max.
Line Voltage Regulation (VL to VH at full load)		±0.5% max.
Load Voltage Regulation	Single	±0.5% max.
(25% to 100% full load)	Dual	±1.2% max.
Cross Regulation (100%: 25% to 100% full load)		±5% max.
Output Ripple and Noise (with 100n output capacitor and 20MHz BW)		50mVp-p max.
Start-up time		300ms typ.
Operating Frequency (Full Load)		330kHz typ.
Efficiency at Full Load		see Selection Guide
Minimum Load		0%

continued on next page

ECONOLINE
DC/DC-Converter
with 3 year Warranty

RECOM

8 Watt DIP24 & SMD Single & Dual Output



RoHS 2011/65/EU 6/6

E-224736

EN-60950-1 Certified
UL-60950-1 Certified
EN-60601-1 Certified

REC8

Refer to Application Notes

REC8-S_DRW(Z)/H*/A/M Series

Specifications cont. (measured at T_A = 25°C, nominal input voltage, full load and after warm-up)

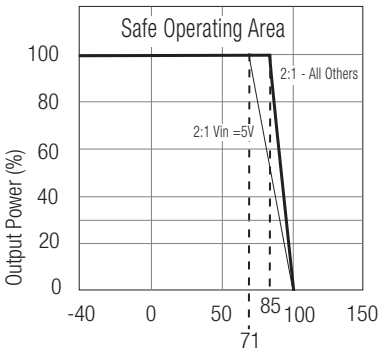
Input Surge Voltage (100ms max.)		5V Input	15VDC
		12V Input	36VDC
		24V Input	50VDC
		48V Input	100VDC
Isolation Voltage	H2-Suffix and SMD	(tested for 1 second)	2000VDC
		(rated for 1 minute**)	1000VAC / 60Hz
	H3-Suffix	(tested for 1 second)	3000VDC
		(rated for 1 minute**)	1500VAC / 60Hz
Isolation Capacitance			1200pF typ.
Isolation Resistance			1 GΩ min.
Overload Protection			150% typ.
Short Circuit Protection			Continuous, Auto Restart
Operating Temperature Range		4:1	-40°C to +71°C (see Graph)
		2:1- Vin=5V	-40°C to +71°C (see Graph)
(free air convection)		2:1 - All Others	-40°C to +85°C (see Graph)
Remote On/Off		DC/DC ON	Open or 3.5V<Vr<12V
		DC/DC OFF	Short or 0V<Vr<1.2V
Storage Temperature Range			-55°C to +105°C
Temperature Coefficient			±0.05% max.
Relative Humidity			95% RH max.
Case Material			Nickel Plated Metal with Non-Conductive Base
Thermal Impedance		Natural convection	12°C/W
Maximum Case Temperature			100°C
Vibration			10-55Hz, 2G, 30mins along X,Y & Z
Package Weight			18g
Packing Quantity		Tube	15 pcs
		Tape and Reel	100 pcs
MTBF (+25°C) } *Detailed Information see*		using MIL-HDBK 217F	1200 x 10^3hours
(+71°C) } *Application Notes chapter "MTBF"*		using MIL-HDBK 217F	>300 x 10^3hours

Certifications

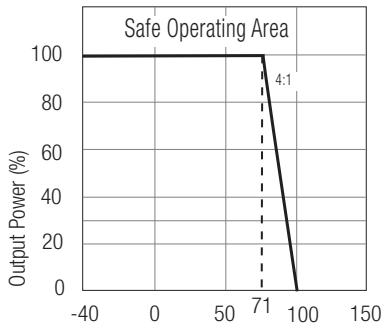
EN General Safety	Report: SPCLVD1211033-2	EN60950-1:2006 +A12:2011
UL General Safety	Report: E224736	UL 60950-1 1st Ed.
		C22.2 No. 60950-1-03
EN Medical Safety	Report: MDD12060585 + RM1206085	IEC/EN 60601-1 3rd Edition
		Medical Report + ISO14971 Risk Assessment

Derating-Graph
(Ambient Temperature)

2:1 Converters



4:1 Converters



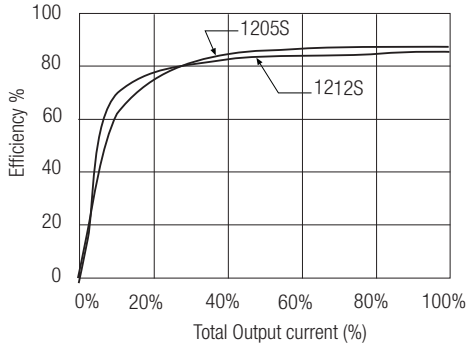
**Any data referred to in this datasheet are of indicative nature and based on our practical experience only.

For further details, please refer to our Application Notes.

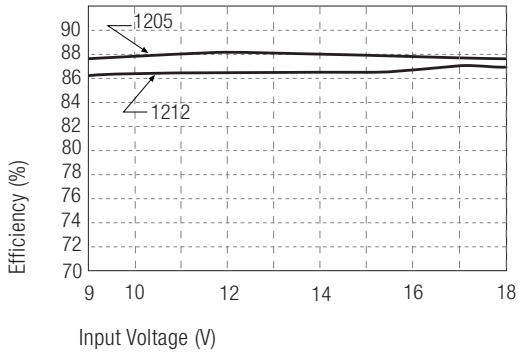
Typical Characteristics

REC8-1205SRW/H2/A/M (/SMD)
REC8-1212SRW/H2/A/M (/SMD)

Efficiency / Load (Nominal Vin)



Efficiency VS Input Voltage

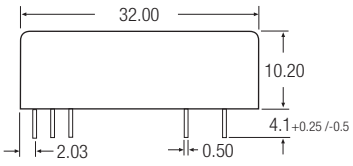


Note: Refer to Application Notes for EMC Class B Filter suggestion

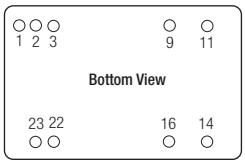
REC8-S_DRW(Z)/H*/A/M Series

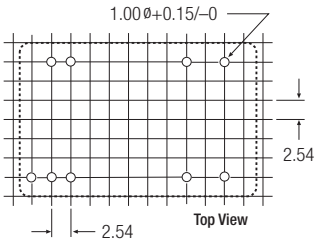
Package Style and Pinning (mm)

24 PIN DIP Package - Available with /H2 and /H3 Options



Recommended Footprint Details





Pin Connections DIP24

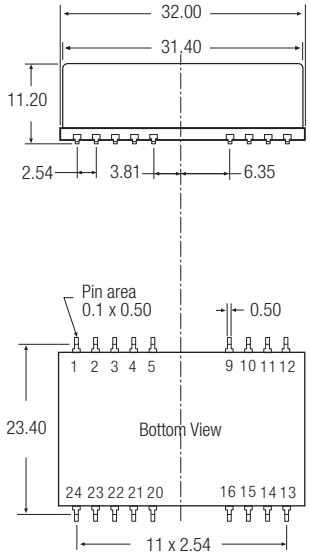
Pin #	Single	Dual
1	CTRL	CTRL
2	–Vin	–Vin
3	–Vin	–Vin
9	NC	Com
11	NC	–Vout
14	+Vout	+Vout
16	– Vout	Com
22	+Vin	+Vin
23	+Vin	+Vin

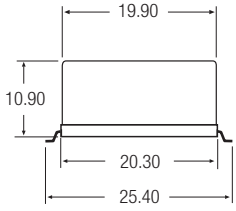
NC = No Connection

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

REC8

24 PIN SMD Package - available with /H2 option only.





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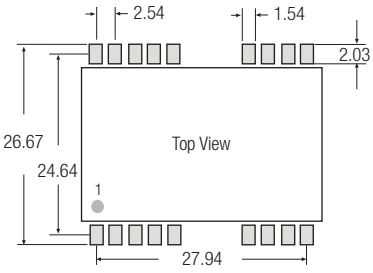

Pin Connections DIP24 SMD

Pin #	Single	Dual
1	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
4,5,10,12		NC
13,15,20,21,24		NC

NC = No Connection

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

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