

Features

Regulated Converters

Rev.0

- Low Cost 3W converter in DIP24 Package
- 1kVDC Isolation
- Regulated Output
- UL Approved
- Continuous Short Circuit Protection
- Internal SMD design
- 3 Pinout Options, 3 Case Styles.
- Efficiency to 75 %

Description

The REC3-SR/DR series is a low cost converter containing a built in linear regulator to give a regulated, load independent constant voltage output. The converter is designed to run from a regulated supply and is typically used to provide an isolated output or to generate dual rails from a single rail supply.

Selection Guide

Part Cap. Load DIP24 (SMD)	Input Number (VDC)	Output Voltage (VDC)	Output Voltage (mA)	Max. Current
REC3-xx05SR/H1	5, 12, 24	5	600	1000 μ F
REC3-xx12SR/H1	5, 12, 24	12	250	220 μ F
REC3-xx15SR/H1	5, 12, 24	15	200	120 μ F
REC3-xx05DR/H1	5, 12, 24	\pm 5	\pm 300	\pm 470 μ F
REC3-xx12DR/H1	5, 12, 24	\pm 12	\pm 125	\pm 100 μ F
REC3-xx15DR/H1	5, 12, 24	\pm 15	\pm 100	\pm 68 μ F

xx = Input Voltage. Other input and output voltage combinations available on request.

* add suffix "/SMD" for SMD package, e.g. REC3-0505SR/H1/SMD

* add suffix "/M" for Metal Case, e.g. REC3-0505SR/H1/M

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

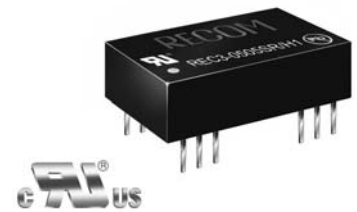
Input Voltage Range		\pm 15%
Output Voltage Accuracy		\pm 3% typ.
Line Voltage Regulation		\pm 0.5% max
Load Voltage Regulation (10% to 100% full load)		\pm 1% max.
Output Ripple and Noise (at 20MHz BW)		100mVp-p max.
Operating Frequency		75kHz min.
Efficiency at Full Load		65% min.
No Load Power Consumption		300mW max.
Isolation Voltage	(tested for 1 second)	1000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Capacitance		30pF typ.
Isolation Resistance		1 G Ω min.
Short Circuit Protection		Continuous
Operating Temperature Range (free air convection)		-40 $^\circ\text{C}$ to +80 $^\circ\text{C}$ (see Graph)
Storage Temperature Range		-55 $^\circ\text{C}$ to +125 $^\circ\text{C}$
Relative Humidity		95% RH
Thermal Impedance	Natural convection	20 $^\circ\text{C}/\text{W}$ for metal case
Package Weight		12g
MTBF (+25 $^\circ\text{C}$)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F
(+80 $^\circ\text{C}$)		using MIL-HDBK 217F

ECONOLINE

DC/DC-Converter

REC3-S_DR/H1 Series

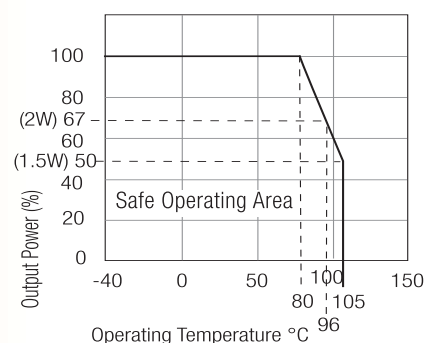
3 Watt DIP24 & SMD Single & Dual Output



UL-60950-1 Certified

RECOM

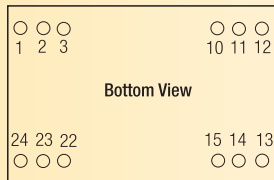
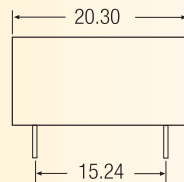
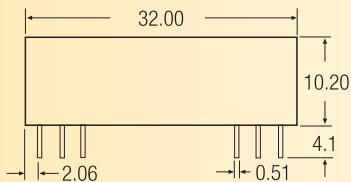
Derating-Graph (Ambient Temperature)



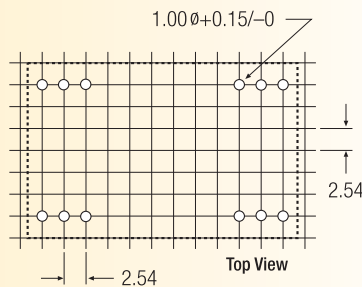
Package Style and Pinning (mm)



24 PIN DIP Package



Recommended Footprint Details

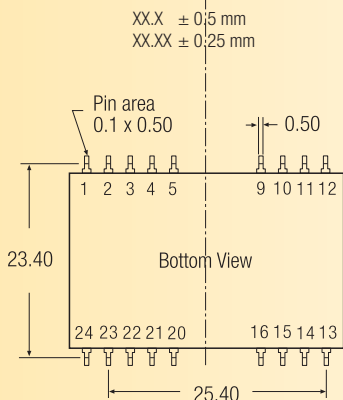
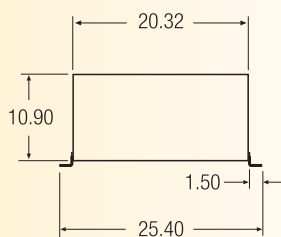
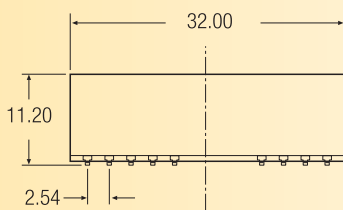


Pin Connections

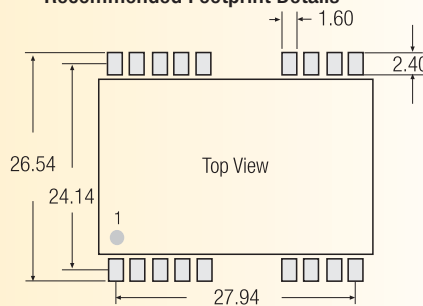
Pin #	Single	Dual
1	+Vin	+Vin
2	No Pin	-Vout
3	No Pin	Com
10	-Vout	Com
11	+Vout	+Vout
12	-Vin	-Vin
13	-Vin	-Vin
14	+Vout	+Vout
15	-Vout	Com
22	No Pin	Com
23	No Pin	-Vout
24	+Vin	+Vin

NC = No Connection
XX.X ± 0.5 mm
XX.XX ± 0.25 mm

24 PIN DIP SMD Package



Recommended Footprint Details



SMD pin connections follow standard package pinning.

All unused pins are NC (No Connection).

Pin Connections

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