

Features

Regulated Converters

- 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. 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 DIP24 (SMD)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Max Capacitive Load ⁽¹⁾
REC3-xx05SR/H1	5, 12, 24	5	600	4700µF
REC3-xx12SR/H1	5, 12, 24	12	250	2200µF
REC3-xx15SR/H1	5, 12, 24	15	200	2200µF
REC3-xx05DR/H1	5, 12, 24	±5	±300	±2200µF
REC3-xx12DR/H1	5, 12, 24	±12	±125	±1000µF
REC3-xx15DR/H1	5, 12, 24	±15	±100	±1000µF

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

* add suffix "-R" for Tape and Reel packaging, e.g. REC3-0505SR/H-R

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

Input Voltage Range	±15%	
Output Voltage Accuracy	±3% typ.	
Line Voltage Regulation	±0.5% max	
Load Voltage Regulation (10% to 100% full load)	±1% max.	
Minimum Load	0%	
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
	(rated for 1 minute)	500VAC / 60Hz
Isolation Capacitance	30pF typ.	
Isolation Resistance	1 GΩ min.	
Short Circuit Protection	Continuous	
Operating Temperature Range (free air convection)	-40°C to +80°C (see Graph)	
Storage Temperature Range	-55°C to +125°C	
Relative Humidity	95% RH	
Thermal Impedance	Natural convection	20°C/W for plastic case 12°C/W for metal case
Package Weight	12g	
Packing Quantity	15 pcs per Tube 100 pcs per Reel	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F 950 x 10 ³ hours
(+80°C)		using MIL-HDBK 217F 145 x 10 ³ hours

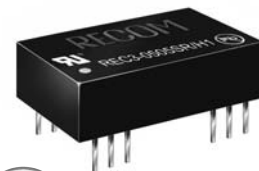
ECONOLINE

DC/DC-Converter

with 3 year Warranty

RECOM

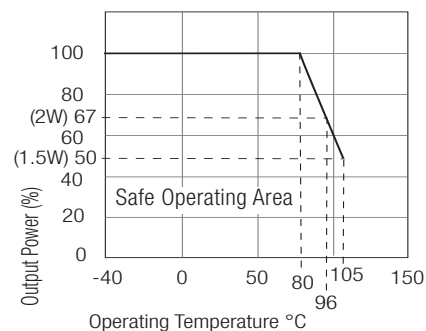
3 Watt DIP24 & SMD Single & Dual Output



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

REC3-S_DR

Derating-Graph (Ambient Temperature)



Refer to Application Notes

Specifications (continued)

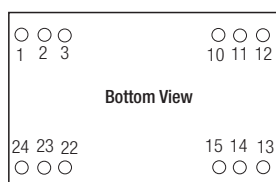
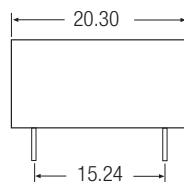
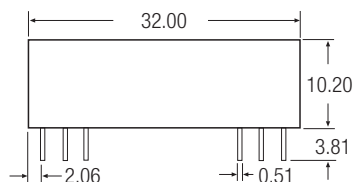
Certifications	UL General Safety	Report: E248550	UL 60950-1 1st Ed.
	EN General Safety	Report: LVD-2K05230	C22.2 No. 60950-1-03
	EN Medical Safety	Report: ETS-060065	EN60950-1:2001 EN60601-1:1988 + A1: 1991 + A2: 1995

Notes

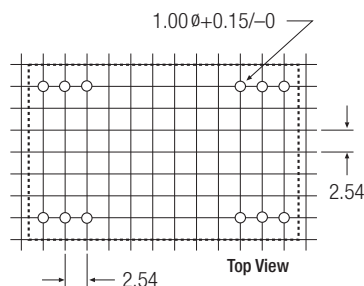
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter

Package Style and Pinning (mm)

24 PIN DIP Package



Recommended Footprint Details



Pin Connections

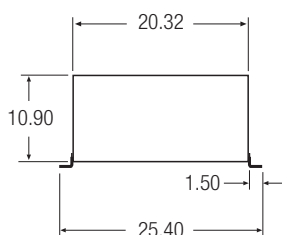
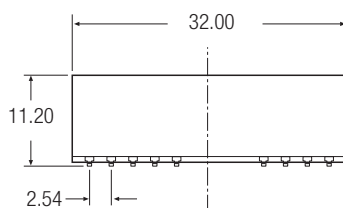
Pin #	Single	Dual
1	+Vin	+Vin
2	No Pin	-Vout
3	No Pin	Com
10	-Vout	Com
11	+Vout	+Vout
12	-Vin	-Vin
13	-Vin	-Vin
14	+Vout	+Vout
15	-Vout	Com
22	No Pin	Com
23	No Pin	-Vout
24	+Vin	+Vin

NC = No Connection

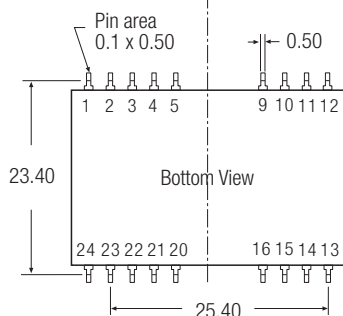
XX.X ± 0.5 mm
XX.XX ± 0.25 mm



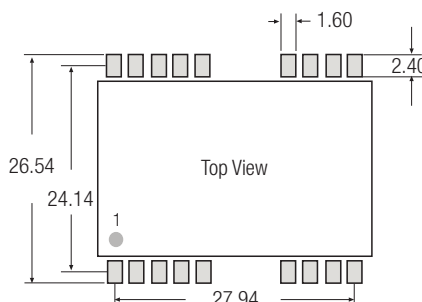
24 PIN DIP SMD Package



XX.X ± 0.5 mm
XX.XX ± 0.25 mm



Recommended Footprint Details



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	NC	-Vout
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

SMD pin connections follow standard package pinning.

All unused pins are NC (No Connection).