Features

Regulated Converters

- 15W in 2" x 1" Package
- 2kVDC and 3kVDC Isolation Options
- 2:1 or 3:1 Input Voltage Range
- Continuous Short Circuit Protection (power limiting)
- Synchronous Rectification on 3.4V & 5.1V outputs
- Full SMD internal design
- Remote Control Pin
- Efficiency to 87%

Description

The REC15-xxxxS_D -series offer single and dual regulated outputs in a 2"x1" package with 2kVDC or 3kVDC isolation options and are suitable for higher power industrial or medical applications. Remote on/off control is standard. The outputs with 3A load current have raised output voltages to compensate for track losses as standard.

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Cap. Load
REC15-xx3.4S/H*	9-18, 18-36, 36-75	3.4	3000	84-85	470µF
REC15-xx5.1S/H*	9-18, 18-36, 36-75	5.1	3000	86-87	470µF
REC15-xx12S/H*	9-18, 18-36, 36-75	12	1250	85-86	220µF
REC15-xx15S/H*	9-18, 18-36, 36-75	15	1000	85-86	100µF
REC15-xx05D/H*	9-18, 18-36, 36-75	±5	±1500	83-84	±220µF
REC15-xx12D/H*	9-18, 18-36, 36-75	±12	±625	85-86	±100µF
REC15-xx15D/H*	9-18, 18-36, 36-75	±15	±500	85-86	±50µF
REC15-xx3.4SZ/H*	12-36, 24-75	3.4	3000	85	470µF
REC15-xx5.1SZ/H*	12-36, 24-75	5.1	3000	87	470µF
REC15-xx12SZ/H*	12-36, 24-75	12	1250	86	220µF
REC15-xx15SZ/H*	12-36, 24-75	15	1000	85	100µF
REC15-xx05DZ/H*	12-36, 24-75	±5	±1500	86	±220µF
REC15-xx12DZ/H*	12-36, 24-75	±12	±625	86	±100µF
REC15-xx15DZ/H*	12-36, 24-75	±15	±500	86	±50µF

* Standard is /H2 for 2kVDC isolation, use /H3 for 3kVDC Isolation

2:1	3:1
xx = 9-18Vin = 12, xx = 18-36Vin = 24, xx = 36-75Vin = 48	xx = 12-36Vin = 24, xx = 24-75Vin = 48

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

Input Voltage Range		2:1 / 3:1
Input Filter		PI Network
Output Voltage Accuracy		±1.5% max.
Line Voltage Regulation		±0.5% max.
Load Voltage Regulation (25% to 100% full load)	Single	±0.5% max.
	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)		100mVp-p max.
Start-up time		300ms typ.
Worst Case Stabilization Time		1200ms
Operating Frequency (Full Load)		300kHz typ.
Efficiency at Full Load		see Selection Guide
Minimum Load		0%
		cont.

ECONOLINE

DC/DC-Converter

with 3 year Warranty

RECOM

15 Watt 2" x 1" Single & Dual Output

RoHS 2011/65/EU 6/6

E-224736

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

REC15

REC15

REC15-S_D/H* Series

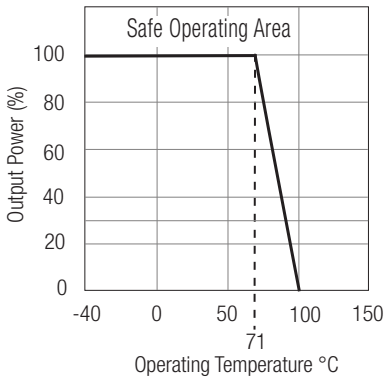
Specifications cont. (measured at T_A = 25°C, nominal input voltage, full load and after warm-up)

Input Surge Voltage (100ms max.)		12V Input	36VDC
		24V Input	50VDC
		48V Input	100VDC
Isolation Voltage	/H2 Version	(tested for 1 second)	2000VDC
		(rated for 1 minute)	1000VAC / 60Hz
	/H3 Version	(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		3:1	-40°C to +65°C (see Graph)
(free air convection)		2:1	-40°C to +71°C (see Graph)
Storage Temperature Range			-55°C to +105°C
Remote On/Off		DC/DC ON	Open or 3.5V<Vr<12V
		DC/DC OFF	Short or 0V<Vr<1.2V
Temperature Coefficient			±0.05% max.
Relative Humidity			95% RH
Case Material			Nickel Plated Metal with Non-Conductive Base
Thermal Impedance		Natural convection	20°C/W
Maximum Case Temperature			100°C
Vibration			10-55Hz, 2G, 30mins along X,Y & Z
Package Weight			27g
Packing Quantity			10 pcs per Tube
MTBF (+25°C)	*Detailed Information see Application Notes chapter "MTBF"*	using MIL-HDBK 217F	>700 x 10^3hours
(+71°C)		using MIL-HDBK 217F	>150 x 10^3hours

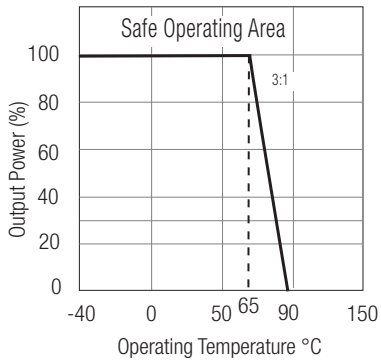
Certifications		
EN General Safety	Report: PS090302950C2	EN60950-1:2006
UL General Safety	Report: E224736	UL 60950-1 1st Ed.
		C22.2 No. 60950-1-03
EN/CB Medical Safety	Report: MDD1206085 + RM1206058	IEC/EN60601-1 3rd. Ed.
		Medical Report + ISO14971 Risk Assessment

Derating-Graph
(Ambient Temperature)

2:1 Converters



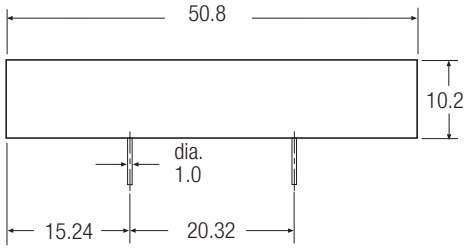
3:1 Converters

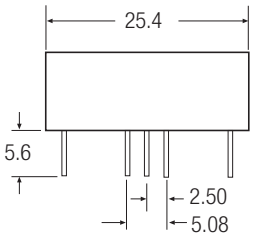


Note: Refer to Application Notes for EMC Class B Filter suggestion

REC15

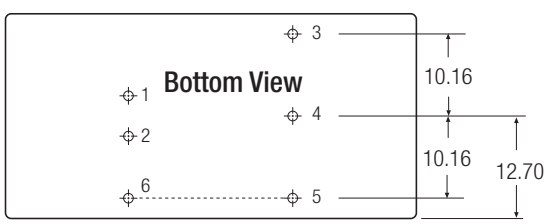
Package Style and Pinning (mm)





3rd angle projection

2" x 1" Package



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	–Vin	–Vin
3	+Vout	+Vout
4	No Pin	Com
5	–Vout	–Vout
6	CTRL	CTRL

XX.X ± 0.5 mm
XX.XX ± 0.35 mm