

Features

Regulated Converters

- 2:1 Wide Range Voltage Input
- 1kVDC Isolation
- UL94V-0 Package Material
- Continuous Short Circuit Protection with Current Foldback
- Low Noise
- No External Capacitor needed
- Efficiency to 85%

ECONOLINE

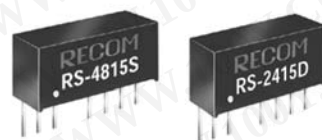
DC/DC-Converter

RS Series

Selection Guide 5V, 12V, 24V and 48V Input Types

Part Number	Input Voltage Range	Rated Output Voltageat	Output Current Full Load	Efficiency typ.
SIP8	(VDC)	(VDC)	(mA)	(%)
RS-053.3	4.5 - 9	3.3	500	65
RS-0505	4.5 - 9	5	400	70
RS-0509	4.5 - 9	9	222	75
RS-0512	4.5 - 9	12	167	76
RS-0515	4.5 - 9	15	133	78
RS-123.3	9 - 18	3.3	500	72
RS-1205	9 - 18	5	400	77
RS-1209	9 - 18	9	222	78
RS-1212	9 - 18	12	167	81
RS-1215	9 - 18	15	133	82
RS-243.3	18 - 36	3.3	500	73
RS-2405	18 - 36	5	400	77
RS-2409	18 - 36	9	222	81
RS-2412	18 - 36	12	167	83
RS-2415	18 - 36	15	133	84
RS-483.3	36 - 72	3.3	500	74
RS-4805	36 - 72	5	400	76
RS-4809	36 - 72	9	222	81
RS-4812	36 - 72	12	167	84
RS-4815	36 - 72	15	133	84
RS-0505D	4.5 - 9	±5	±200	70
RS-0509D	4.5 - 9	±9	±111	73
RS-0512D	4.5 - 9	±12	±83	75
RS-0515D	4.5 - 9	±15	±67	75
RS-1205D	9 - 18	±5	±200	75
RS-1209D	9 - 18	±9	±111	78
RS-1212D	9 - 18	±12	±83	80
RS-1215D	9 - 18	±15	±67	80
RS-2405D	18 - 36	±5	±200	78
RS-2409D	18 - 36	±9	±111	81
RS-2412D	18 - 36	±12	±83	83
RS-2415D	18 - 36	±15	±67	83
RS-4805D	36 - 72	±5	±200	76
RS-4809D	36 - 72	±9	±111	79
RS-4812D	36 - 72	±12	±83	81
RS-4815D	36 - 72	±15	±67	81

2 Watt SIP8 Isolated Single & Dual Output



RECOM

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

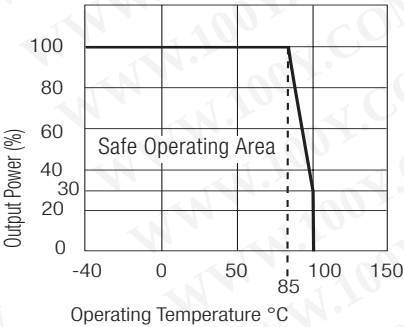
Description

High power-density covering the temperature range -40°C to $+85^{\circ}\text{C}$, offering extra features like Remote-On-Off-function and Output-Filtering via 1 external capacitor only, are just some of the characteristics of this converter, ideal for highly sophisticated industrial-designs.

Electrical Specifications (measured at $T_A = 25^{\circ}\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

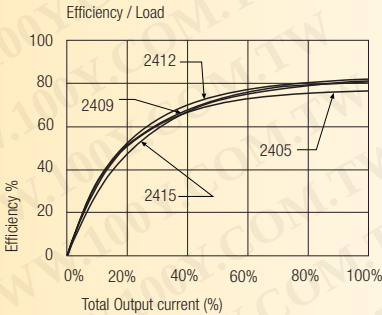
Input Voltage Range	2:1	
Output Accuracy	Single output	$\pm 1\%$
	Dual output	$\pm 2\%$
Line Voltage Regulation	Single output	$\pm 0.2\%$ max.
	Dual output	$\pm 0.5\%$ max.
Load Voltage Regulation (25% to 100% full load)	Single & Dual output	$\pm 0.5\%$ typ.
Output Ripple and Noise (20MHz limited)	50mVp-p max.	
Switching Frequency (at full Load)	Single output	85kHz min.
	Dual output	100kHz min. / 700kHz max.
Efficiency at Full Load	70% min. / 80% typ.	
No Load Power Consumption	50mW min. / 139mW typ. / 250mW max.	
Isolation Voltage	(tested for 1 second)	1.000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Capacity	Single output	40pF typ. / 60pF max.
	Dual output	400pF max.
Isolation Resistance	1G Ω min.	
Short Circuit Protection	Continuous	
Operating Temperature Range	-40°C to $+85^{\circ}\text{C}$	
Storage Temperature Range	Single output	-50°C to $+125^{\circ}\text{C}$
	Dual output	-55°C to $+105^{\circ}\text{C}$
Package Weight	4.8g	
MTBF ($+25^{\circ}\text{C}$)	using MIL-HDBK 217F	1398×10^3 hours
	($+85^{\circ}\text{C}$) using MIL-HDBK 217F	210×10^3 hours

Derating-Graph
(Ambient Temperature)

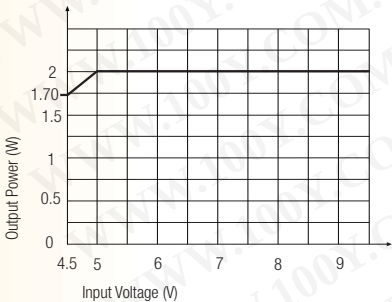


Typical Characteristics

RS-24xx

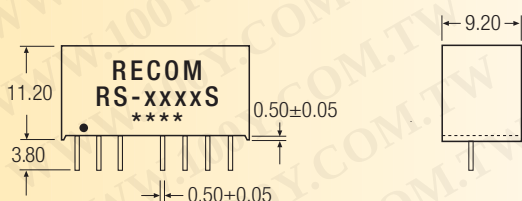


RS-types

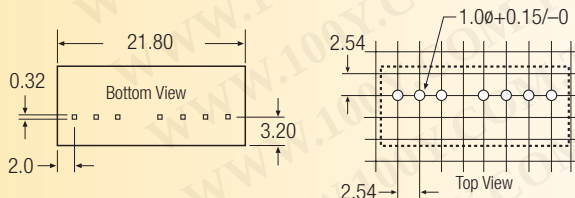


Package Style and Pinning (mm)

8 PIN SIP Package



Recommended Footprint Details



Control Pin Input Current: 10mA

Voltage Set Point Accuracy with external input/output capacitors refer to recommended test circuit: typ. $\pm 1\%$ max. $\pm 2\%$

Control Pin (CTRL) Input Current, control voltage applied via 1K resistor, output voltage must reduce to 0V: typ. 3mA max. 6mA

Pin 3 (CTRL)

This pin provides an Off function which puts the converter into a low power mode. When the pin is 'high' the converter is OFF and when the pin is high 'Z' the converter is ON. There is no allowed low state for this pin. Voltage to be applied via a limiting resistor with a recommended value of 1K for RS-05xx; 3.3K for RS-12xx; RS-24xx and 10K for RS-48xx.

Pin 5 (NE)

This pin is used internally and must have no external connection.

Pin Connections

Pin #	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
3	CTRL	CTRL
5	NC	NC
6	+Vout	+Vout
7	-Vout	Com
8	CS Optional external capacitor	-Vout

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

Pin 8 (Cs)

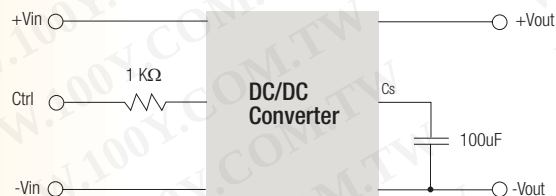
This pin provides a connection point to the main reservoir capacitor. Additional capacitance can be added from this to pin 7. Any low ESR capacitor will improve ripple and noise in some measure. The benefit of this access point over simple additional output capacitance is that it precedes the output filter inductor. Maximum values of external capacitance will depend on the output voltage/loading of the converter and the desired ripple figure. Starting values can be in the range of 100uF.

This pin is available only for the RS-xxxxS, dual output series do not have this Cs Pin.

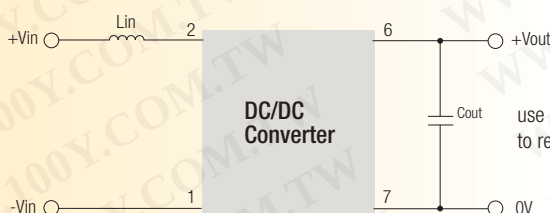
Application circuit

Remote ON/OFF

ON: open or high impedance.
 OFF: 3---6mA input current applied Via 1K Ω resistor (OFF stand by current 10mA max.)



L_{in}	RS- types	4.7uH ~ 100uH
C_{out}	RS- types	22uF ~ 100uF/25V



use low ESR capacitor Cout and input inductor Lin to reduce output ripple and input inrush current.