

Features

Regulated Converters

- Internal SMD Technology
- 1kVDC Isolation
- Continuous Short Circuit Protected
- UL94V-O Package Material
- Regulated Output
- No External Components Required
- Efficiency to 63%

ECONOLINE

DC/DC-Converter

RY/S_DCP Series

Selection Guide

Part Number	Input Voltage	Output Voltage	Output Current	Input Current		Efficiency
	(VDC)	(VDC)	(mA)	Full Load	No Load	(%)
SIP 7	(VDC)	(VDC)	(mA)	(mA)		
RY-0505SCP/DCP	5	5/±5	200/±100	350	20	57
RY-0512SCP/DCP	5	12/±12	84/±42	330	32	61
RY-0515SCP/DCP	5	15/±15	67/±34	322	32	62
RY-1205SCP/DCP	12	5/±5	200/±100	141	10	59
RY-1212SCP/DCP	12	12/±12	84/±42	134	15	62
RY-1215SCP/DCP	12	15/±15	67/±34	132	15	63
RY-2405SCP/DCP	24	5/±5	200/±100	67	6	62
RY-2412SCP/DCP	24	12/±12	84/±42	66	6	63
RY-2415SCP/DCP	24	15/±15	67/±34	66	6	63

xx = Input Voltage

Description

These converters are designed to offer short circuit protected outputs in industrial standard 1 Watt package for the temperature range -25°C to +70°C.

The Single-output-converters also offer a Remote-On-Off pin for external control of the output voltage by standard TTL-open-collector-port or similar. For details regarding this feature please refer to our RY-series.

Specifications (Core Operating Area)

Input Voltage Range		±10%	
Output Voltage Accuracy		±2%	
Line Voltage Regulation		±0.5% max.	
Load Voltage Regulation (10% to 100% full load)		±0.5% max.	
Output Ripple and Noise (20MHz limited)		50mVp-p max.	
Operating Frequency		100kHz max.	
Efficiency at Full Load		60% typ.	
Isolation Voltage	(tested for 1 second)	1000VDC min.	
Rated Working Voltage	(long term isolation)	see Application Notes	
Isolation Capacitance		20pF max.	
Isolation Resistance		1 GΩ min.	
Short Circuit Protection		continuous	
Temperature Coefficient		0.03%/°C	
Operating Temperature Range (free air convection)		-25°C to +70°C (see Graph)	
Storage Temperature Range		-55°C to +100°C	
Relative Humidity		95% RH	
Package Weight		2.9g	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1023 x 10 ³ hours
(+70°C)		using MIL-HDBK 217F	170 x 10 ³ hours

1 Watt

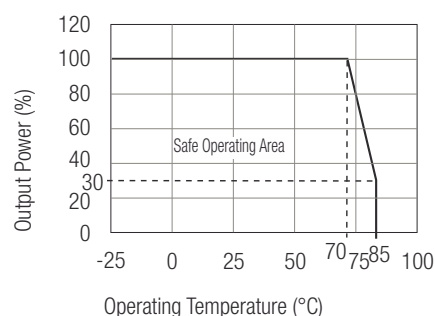
SIP7

Single & Dual Output



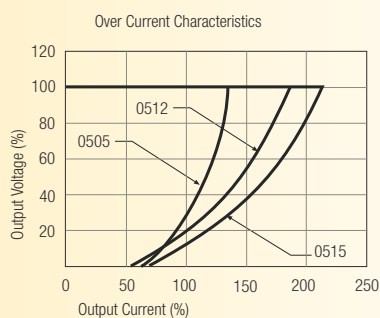
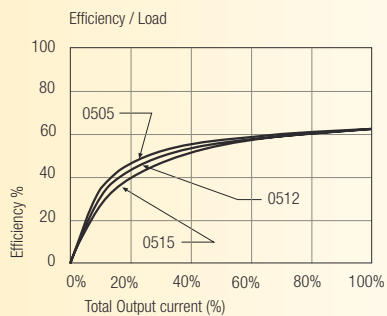
RECOM

Derating-Graph (Ambient Temperature)

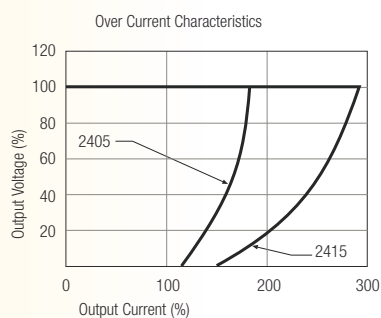
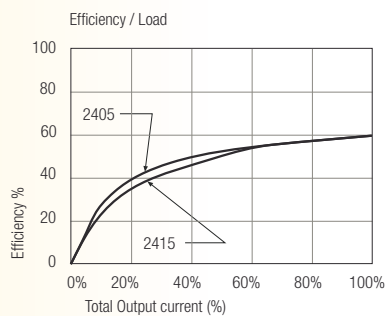


Typical Characteristics

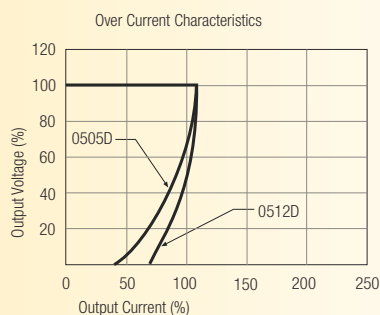
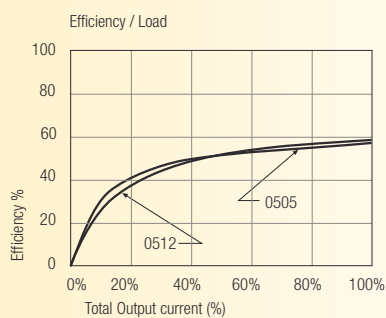
RY-05xxSCP



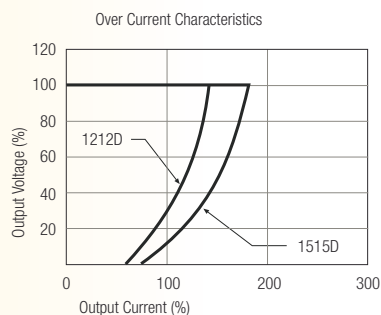
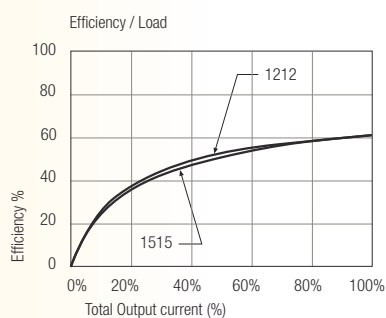
RY-24xxSCP



RY-05xxDCP



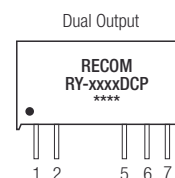
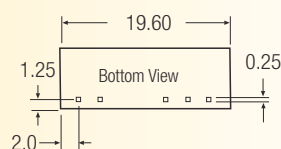
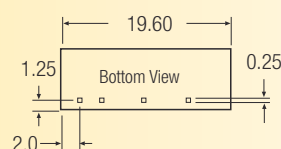
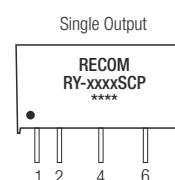
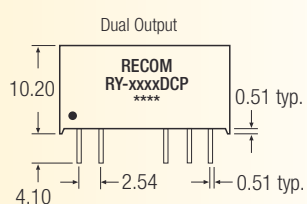
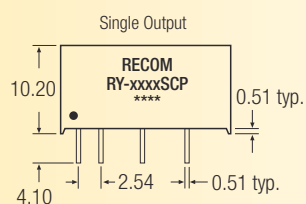
RY-1212_1515DCP



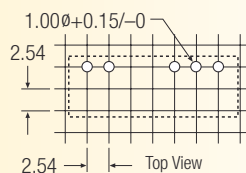
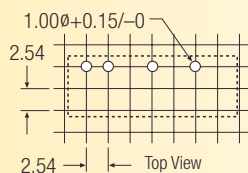
Package Style and Pinning (mm)

7 PIN SIP Package

3rd angle projection



Recommended Footprint Details



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	No Pin
5	No Pin	-Vout
6	+Vout	Com
7	No Pin	+Vout

XX.X $\pm$ 0.5 mm
XX.XX $\pm$ 0.25 mm