

## Features

### Regulated Converters

- Internal SMD Technology
- 1kVDC Isolation
- Short Circuit Protection: Current Limit
- UL94V-0 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-1515SCP/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

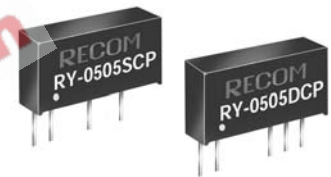
xx = Input Voltage

### 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.

**1 Watt  
SIP7  
Single &  
Dual Output**

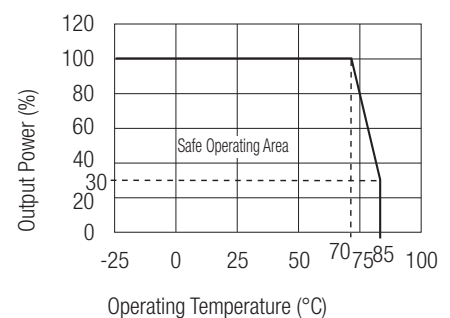


**RECOM**

### Specifications (Core Operating Area)

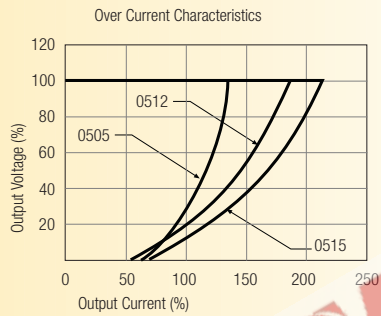
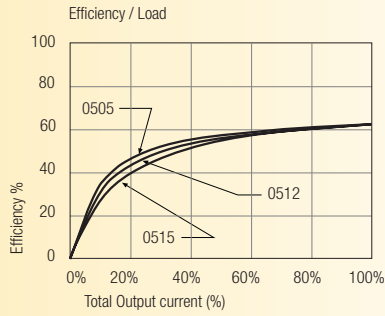
Input Voltage Range	±10%	
Output Voltage Accuracy	±2%	
Line Voltage Regulation	±0.5% max.	
Load Voltage Regulation (10% to 100% full load)	±0.5% max.	
Output Ripple and Noise (20MHz limited)	100mVp-p max.	
Operating Frequency	100kHz max.	
Efficiency at Full Load	60% typ.	
Isolation Voltage	(tested for 1 second)	1.000VDC 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	MSL Level 1	95% RH
Package Weight	2.9g	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F
(+70°C)		using MIL-HDBK 217F
		1023 x 10 <sup>3</sup> hours
		170 x 10 <sup>3</sup> hours

## Derating-Graph (Ambient Temperature)

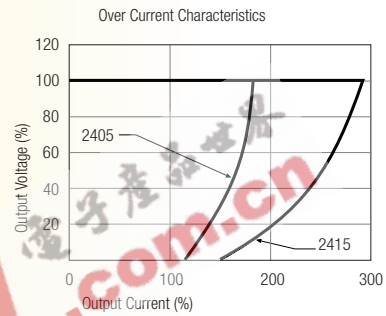
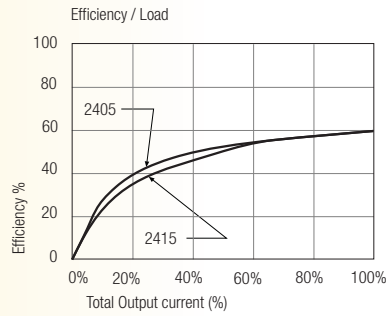


**Typical Characteristics**

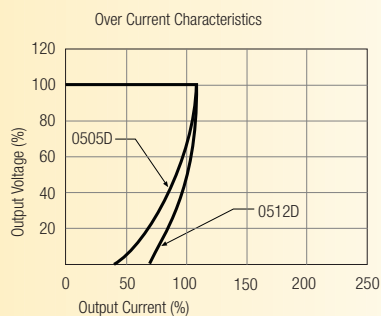
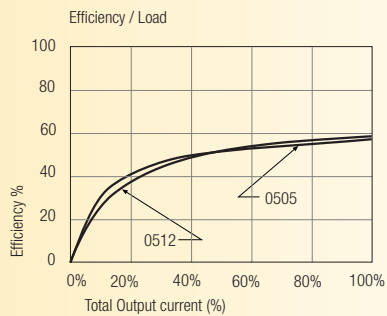
**RY-05xxSCP**



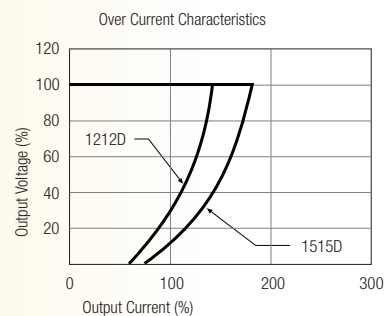
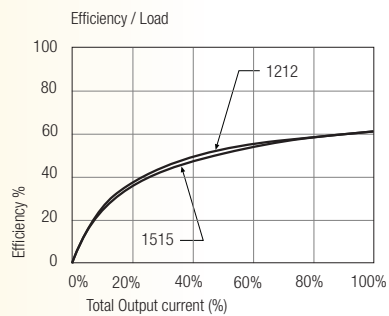
**RY-24xxSCP**



**RY-05xxDCP**

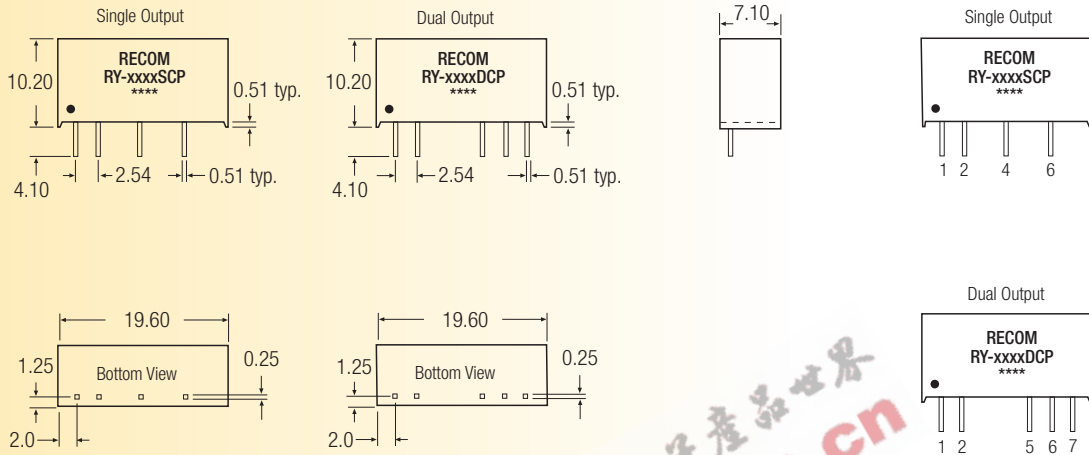


**RY-1212\_1515DCP**

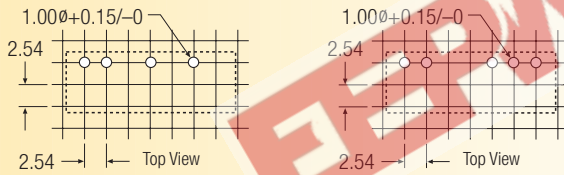


**Package Style and Pinning (mm)**

**7 PIN SIP Package**



**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 ± 0.5 mm  
XX.XX ± 0.25 mm