

## Features

## Unregulated Converters

- 3kVDC Isolation
- Internal SMD Construction
- UL94V-0 Package Material
- Toroidal Magnetics
- Efficiency to 84%

**ECONOLINE**

DC/DC-Converter

# RSD/DH Series

### Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
SMD				
RSD-xx3.3DH	3.3, 5, 9, 12, 15, 24	±3.3	±152	70
RSD-xx05DH	3.3, 5, 9, 12, 15, 24	±5	±100	74-78
RSD-xx09DH	3.3, 5, 9, 12, 15, 24	±9	±56	76-78
RSD-xx12DH	3.3, 5, 9, 12, 15, 24	±12	±42	82
RSD-xx15DH	3.3, 5, 9, 12, 15, 24	±15	±33	80-84
RSD-xx24DH	3.3, 5, 9, 12, 15, 24	±24	±21	80-84

xx = Input Voltage

### Specifications (Core Operating Area)

Input Voltage Range		±10%	
Output Voltage Accuracy		±5%	
Line Voltage Regulation		1.2%/1% of Vin max.	
Load Voltage Regulation (10% to 100% full load)	3.3V output types 5V output type 9V, 12V, 15V, 24V output types	20% max. 15% max. 10% max.	
Output Ripple and Noise (20MHz limited)		±100mVp-p max.	
Operating Frequency		50kHz min. / 100kHz typ. / 105kHz max.	
Efficiency at Full Load		70% min. / 80% typ.	
No Load Power Consumption		87mW min. / 130mW typ. / 190mW max.	
Isolation Voltage	(tested for 1 second)	3.000VDC min.	
Rated Working Voltage	(long term isolation)	see Application Notes	
Isolation Capacitance		15pF min. / 70pF max.	
Isolation Resistance		15 GΩ min.	
Short Circuit Protection		1 Second	
Operating Temperature Range (free air convection)		-40°C to +85°C (see Graph)	
Storage Temperature Range		-55°C to +125°C	
Reflow Temperature (for more details see Application Notes)	ROHS compliant	245°C (30 sec) max.	
Relative Humidity	MSL Level 1	95% RH	
Package Weight		2.2g	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1045 x 10 <sup>3</sup> hours
(+85°C)		using MIL-HDBK 217F	183 x 10 <sup>3</sup> hours

**1 Watt**

**SMD**

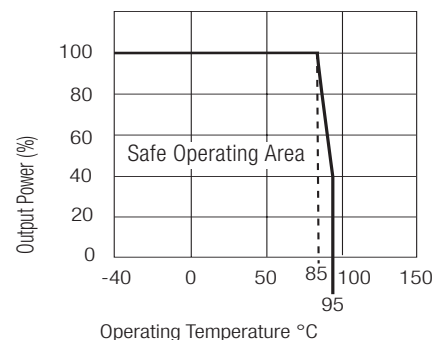
**Dual Output**



**RECOM**

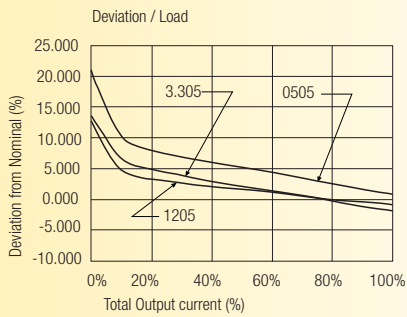
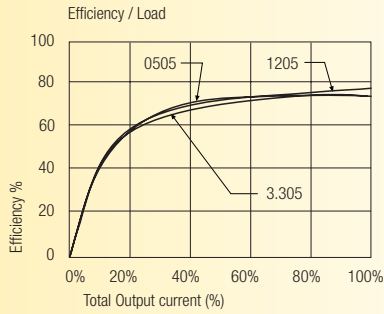
## Derating-Graph

(Ambient Temperature)

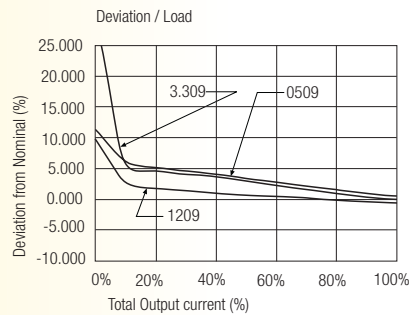
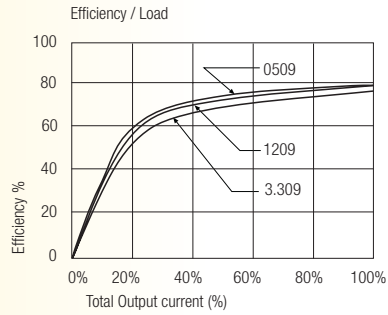


**Typical Characteristics**

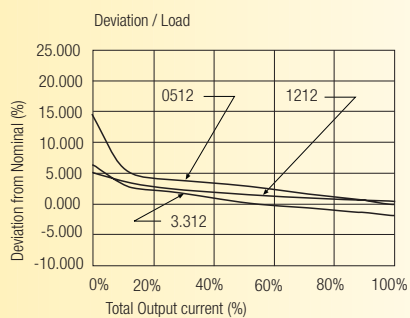
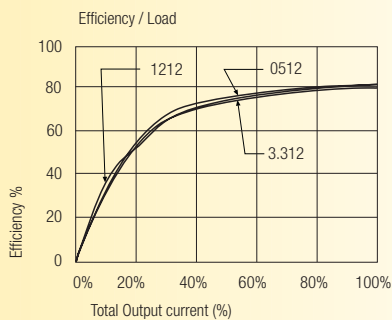
**RSD-xx05DH**



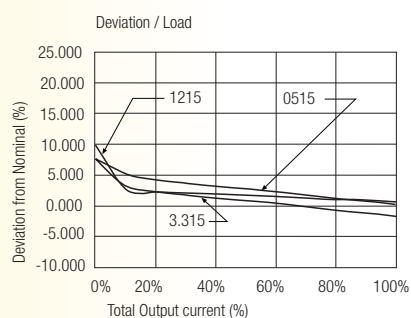
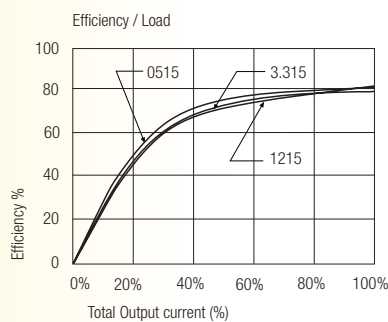
**RSD-xx09DH**



**RSD-xx12DH**

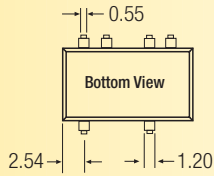
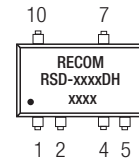
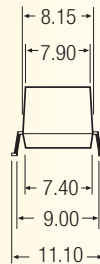
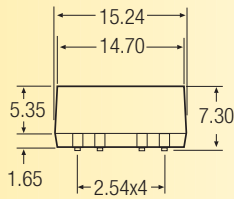


**RSD-xx15DH**

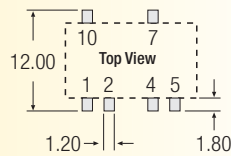


**Package Style and Pinning (mm)**

**10 PIN SMD Package**



**Recommended Footprint Details**



**Pin Connections**

Pin #	Dual
1	-Vin
2	+Vin
4	Com
5	-Vout
7	+Vout
10	NC

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