

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 (%)
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

1 Watt

SMD

Dual Output



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	

Package Weight

2.2g

MTBF: +25°C
(+85°C)

Detailed Information see

Application Notes chapter "MTBF"

using MIL-HDBK 217F

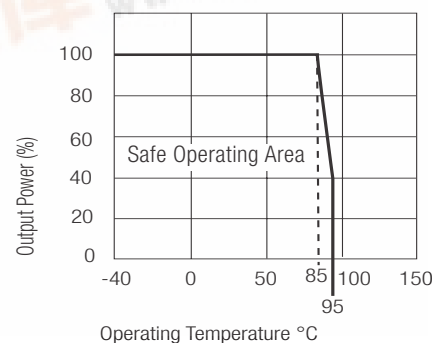
1045 x 10³ hours

using MIL-HDBK 217F

183 x 10³ hours

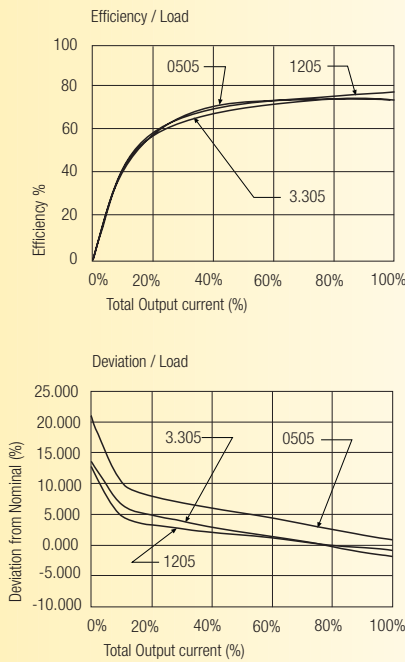


Derating-Graph (Ambient Temperature)

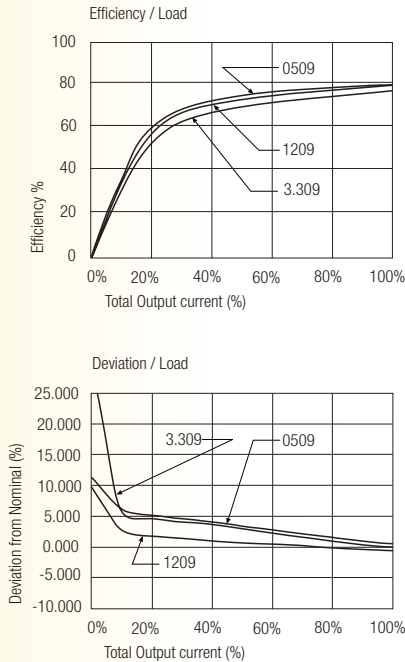


Typical Characteristics

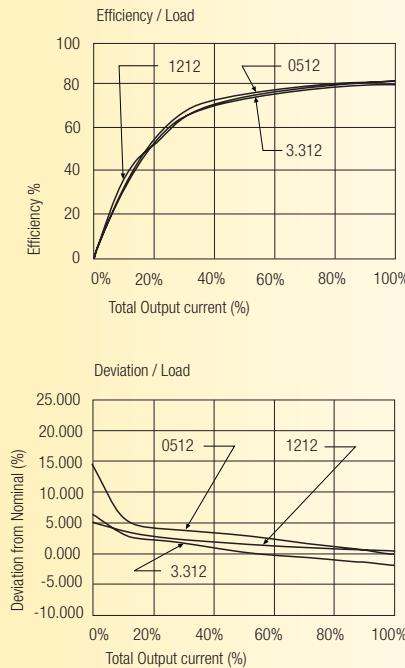
RSD-xx05DH



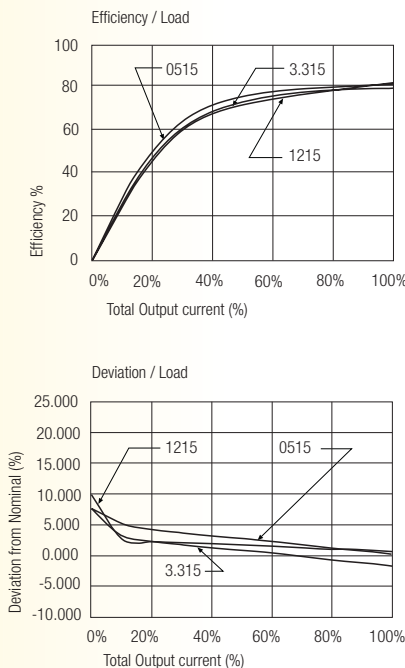
RSD-xx09DH



RSD-xx12DH

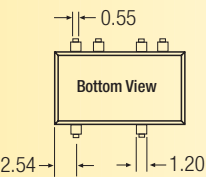
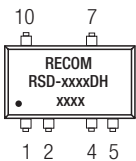
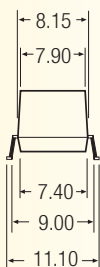
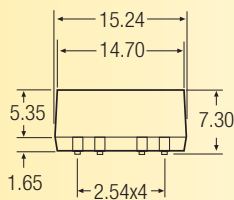


RSD-xx15DH

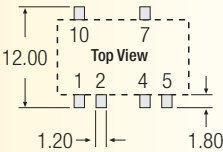


Package Style and Pinning (mm)

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