

# ECONOLINE - DC/DC-Converter

RA Series, 1 Watt, DIP14 (Single & Dual Output)

**RECOM**



## Features

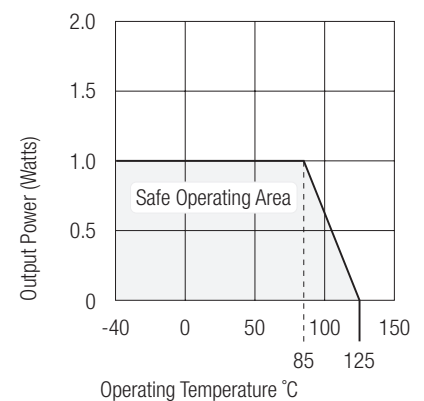
- Dual Output from a Single Input Rail
- Power Sharing on Output
- 1kVDC & 2kVDC Isolation
- Custom Solutions Available
- UL94V-0 Package Material
- Efficiency to 80%

## Selection Guide

Part Number DIP 14	(2kV)	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RA-XX1.8S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	1.8	555	70
RA-XX3.3S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	3.3	303	75
RA-XX05S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	5	200	70-78
RA-XX09S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	9	111	70-78
RA-XX12S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	12	84	78-82
RA-XX15S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	15	66	80-84
RA-XX24S	(H)	1.8, 3.3, 5, 9, 12, 15, 24	24	42	74-85
RA-XX1.8D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±1.8	±278	70
RA-XX3.3D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±3.3	±152	70
RA-XX05D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±5	±100	70-78
RA-XX09D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±9	±56	75-80
RA-XX12D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±12	±42	78-84
RA-XX15D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±15	±33	80-84
RA-XX24D	(H)	1.8, 3.3, 5, 9, 12, 15, 24	±24	±21	80-84

## Specifications (Core Operating Area) and Operating Temperature / Derating-Graph

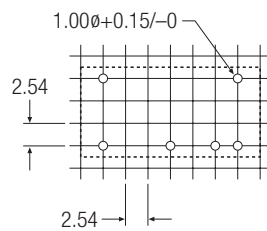
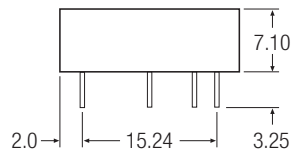
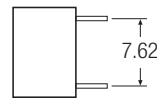
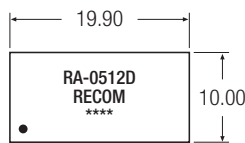
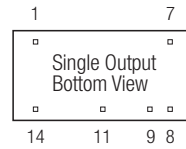
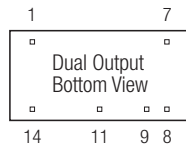
Input Voltage	±10%	
Input Filter	Capacitor Type	
Output Voltage Accuracy	±5%	
Line Voltage Regulation	1,2%/1% V Input	
Load Voltage Regulation (10% to 100% full load)	1.8V, 3.3V output types 5V output type 9V, 12V, 15V, 24V output types	20% max. 15% max. 10% max.
Ripple and Noise (20MHz limited)	Single output types Dual output types	100mVp-p max. ±75mVp-p max.
Efficiency at Full Load	70% min.	
Isolation Voltage	1.000VDC min. (also available with 2.000VDC, Suffix „H“)	
Isolation Resistance (Viso = 500VDC)	10 GΩ min.	
Isolation Capacitance	20pF min./75pF max.	
Short Circuit Protection	1 Second	
Switching Frequency at Full Load	100kHz typ.	
Operating Temperature	-40°C to +85°C (see Graph)	
Storage Temperature	-55°C to +125°C	
Package Weight	2.6g	



## Package Style and Pinning (mm)



### 14 PIN DIP Package



#### Pin Connections

Pin #	Single	Dual
1	-Vin	-Vin
7	NC	NC
8	-Vout	Com
9	+Vout	+Vout
11	NC	-Vout
14	+Vin	+Vin

NC = No Connection

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm