Features

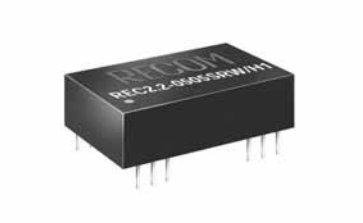
Regulated Converters

- 2.2W DIP Package
- 1kVDC Isolation
- Regulated Output
- Wide Input Range 2 : 1 and 4 : 1
- UL94V-0 Package Material
- Continuous Short Circuit Protection
- Cost Effective
- 100% Burned In
- Efficiency to 84%

ECONOLINE
DC/DC-Converter

REC2.2-S_DRW/H1 Series

2.2 Watt DIP24 Single & Dual Output



RECOM

Selection Guide

Part Number DIP24	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)
REC2.2-xx3.3SRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	3.3	600
REC2.2-xx05SRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	5	440
REC2.2-xx09SRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	9	244
REC2.2-xx12SRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	12	183
REC2.2-xx15SRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	15	146
REC2.2-xx3.3DRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	±3.3	±300
REC2.2-xx05DRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	±5	±220
REC2.2-xx09DRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	±9	±122
REC2.2-xx12DRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	±12	±91
REC2.2-xx15DRW/H1	4.5 - 9, 9 - 18, 18 - 36, 36 - 72	±15	±73
REC2.2-xx3.3SRWZ/H1	9 - 36, 18 - 72	3.3	600
REC2.2-xx05SRWZ/H1	9 - 36, 18 - 72	5	440
REC2.2-xx09SRWZ/H1	9 - 36, 18 - 72	9	244
REC2.2-xx12SRWZ/H1	9 - 36, 18 - 72	12	183
REC2.2-xx15SRWZ/H1	9 - 36, 18 - 72	15	146
REC2.2-xx3.3DRWZ/H1	9 - 36, 18 - 72	±3.3	±300
REC2.2-xx05DRWZ/H1	9 - 36, 18 - 72	±5	±220
REC2.2-xx09DRWZ/H1	9 - 36, 18 - 72	±9	±122
REC2.2-xx12DRWZ/H1	9 - 36, 18 - 72	±12	±91
REC2.2-xx15DRWZ/H1	9 - 36, 18 - 72	±15	±73

2:1 Input
(REC2.2-S/DRW/H1)
xx = 4.5-9Vin = 05
xx = 9-18Vin = 12
xx = 18-36Vin = 24
xx = 36-72Vin = 48

4:1 Input
(REC2.2-S/DRWZ/H1)
xx = 9-36Vin = 24
xx = 18-72Vin = 48

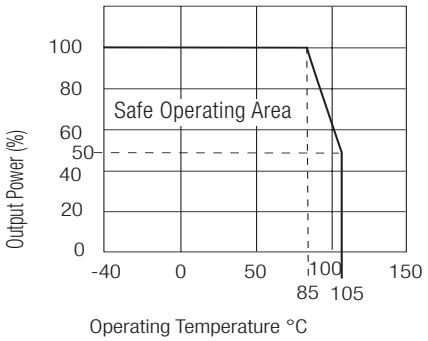
* add suffix "/**A**", "/**B**" or "/**C**" for Pinning, see next page
* add suffix "/**M**" for metal case
e.g. REC2.2-2412SRW/H1/AM = / Pinout "**A**" / metal case.

REC2.2-S_DRW/H1 Series

Specifications (Core Operating Area)

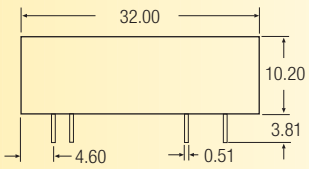
Input Voltage Range		2:1 & 4:1
Output Voltage Accuracy		±1% max.
Line Regulation (HL-LL)	2:1 Input types	±0.2% max.
	4:1 Input types	±0.2% max.
Load Regulation (for output load current change from 20% to 100%)		±0.5% max.
Output Ripple and Noise (0,1µF capacitor on output, 20MHz BW)		50mVp-p max.
Switching Frequency at Full Load	2:1 Input types	90kHz min. / 150kHz max.
and nominal Input Voltage	4:1 Input types	120kHz min. / 180kHz max.
Input Filter		Pi Network
Efficiency at Full Load		84% max.
No Load Power Consumption		200mW typ.
Isolation Voltage SMD Pinout and metal case (see note1)	(tested for 1 second)	1.000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Capacitance	2:1 Input types	20pF min. / 60pF max.
	4:1 Input types	40pF min. / 80pF max.
Isolation Resistance		1 GΩ min.
Short Circuit Protection		Continuous
Operating Temperature Range (free air convection)		-40°C to +85°C (see Graph)
Storage Temperature Range		-55°C to +125°C
Relative Humidity	MSL Level 1	95% RH
Case Material		Non-Conductive Plastic
Thermal Impedance	Natural convection	20°C/W for metal case
Package Weight		12 g
MTBF (+25°C) } *Detailed Information see*	using MIL-HDBK 217F	1102 x 10^3 hours
(+85°C) } *Application Notes chapter "MTBF"*	using MIL-HDBK 217F	186 x 10^3 hours

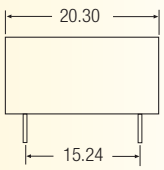
Derating-Graph
(Ambient Temperature)



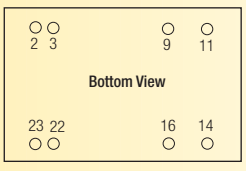
Package Style and Pinning (mm) DIP 24 , Wide Input 2:1 & 4:1

Package A

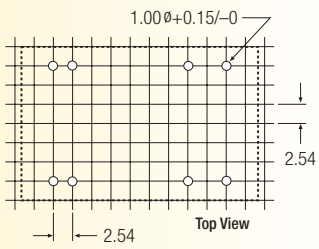




3rd angle projection



Recommended Footprint Details



Pin Connections

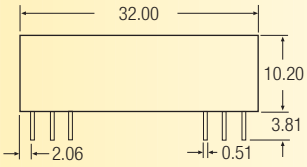
Pin #	Single	Dual
2	–Vin	–Vin
3	–Vin	–Vin
9	NC	Com
11	NC	–Vout
14	+Vout	+Vout
16	– Vout	Com
22	+Vin	+Vin
23	+Vin	+Vin

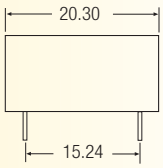
NC = No Connection
XX.X ± 0.5 mm
XX.XX ± 0.25 mm

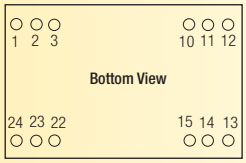
REC2.2-S_DRW/H1 Series

Package Style and Pinning (mm) DIP 24 , Wide Input 2:1 & 4:1

Package B







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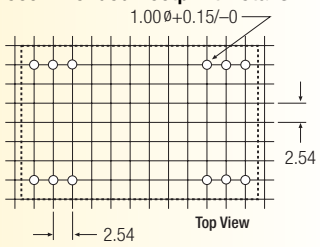


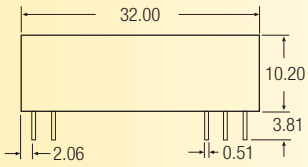
3rd angle projection

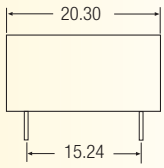
Pin Connections

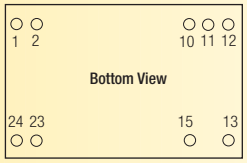
Pin #	Single	Dual
1	+Vin	+Vin
2	No Pin	–Vout
3	No Pin	Com
10	–Vout	Com
11	+ Vout	+ Vout
12	–Vin	–Vin
13	–Vin	–Vin
14	+ Vout	+ Vout
15	–Vout	Com
22	No Pin	Com
23	No Pin	–Vout
24	+Vin	+Vin

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

Package C







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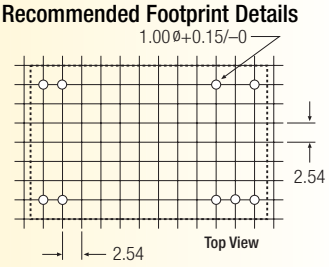
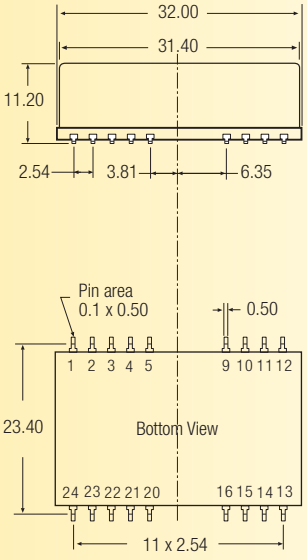


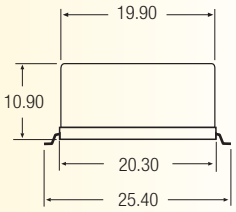
Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	+Vin	+Vin
10	NC	Com
11	NC	Com
12	–Vout	NC
13	+ Vout	–Vout
15	NC	+Vout
23	–Vin	–Vin
24	–Vin	–Vin

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

Mechanical drawings of DIP24 SMD case





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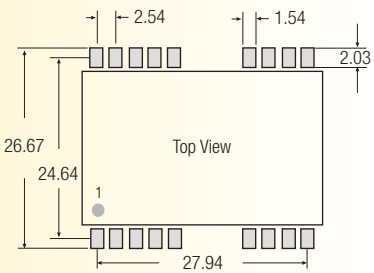

Tol.: ± 0.35 mm

length of plastic case is 31,8mm, length of metal case 32.0mm