

## Features

### Regulated Converters

- 20W 2" x 2" Package (50.8x50.8x21.0mm)
- 1kVDC Isolation
- Wide Input 2:1
- Regulated Output
- UL94V-0 Package Material
- Continuous Short Circuit Protection
- No External Components Required
- Six-Side Shielded Case
- 100% Burned In
- Industry Standard Package
- Remote ON/OFF and Trim
- Efficiency to 85%

## ECONOLINE

DC/DC-Converter

# REC20-S\_DRWB Series

**20 Watt**

**2" x 2"**

**Single &**

**Dual Output**



### Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Input Current <sup>1)</sup> (mA)		Efficiency <sup>2)</sup> (%)
				Full Load	No Load	
REC20-1205SRWB	9-18	5	4.000	2.083	30	80
REC20-1212SRWB	9-18	12	1.667	2.058	30	81
REC20-1215SRWB	9-18	15	1.333	2.058	28	81
REC20-2405SRWB	18-36	5	4.000	1.041	18	80
REC20-2412SRWB	18-36	12	1.667	980	18	85
REC20-2415SRWB	18-36	15	1.333	980	18	85
REC20-4805SRWB	36-72	5	4.000	521	10	80
REC20-4812SRWB	36-72	12	1.667	508	9	82
REC20-4815SRWB	36-72	15	1.333	508	9	82
REC20-1205DRWB	9-18	±5	±2.000	2.083	30	80
REC20-1212DRWB	9-18	±12	±833	2.033	30	82
REC20-1215DRWB	9-18	±15	±667	2.033	28	82
REC20-2405DRWB	18-36	±5	±2.000	1.041	18	80
REC20-2412DRWB	18-36	±12	±833	980	18	85
REC20-2415DRWB	18-36	±15	±667	980	18	85
REC20-4805DRWB	36-72	±5	±2.000	521	10	80
REC20-4812DRWB	36-72	±12	±833	508	9	82
REC20-4815DRWB	36-72	±15	±667	508	9	82

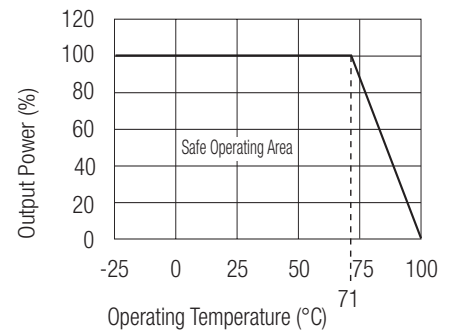
### Notes:

1. at Nominal Input Voltage.
2. at Nominal Input Voltage and Full Load.

**Specifications (Core Operating Area)**

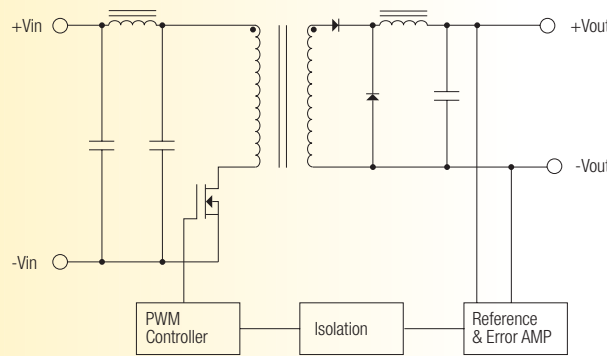
Input Voltage Range	2:1		
Output Voltage Accuracy	±2% max.		
Line Regulation (HL-LL)	±0.2% max.		
Load Regulation (for output load current change from 20% to 100%)	±0.2% max.		
Over Voltage Protection	Built-In		
External Trim Adjustment Range	±10%		
Ripple and Noise (0,1µF capacitor on output, 20MHz BW)	100mVp-p max.		
Switching Frequency at Full Load	100kHz typ.		
Input Filter	Pi Network		
Efficiency at Full Load	75% min.		
Isolation Voltage	(tested for 1 second)	1.000VDC min.	
Rated Working Voltage	(long term isolation)	see Application Notes	
Isolation Capacitance	1200pF max.		
Isolation Resistance	1 GΩ min.		
Short Circuit Protection	Continuous		
Operating Temperature (free air convection)	-25°C to +71°C (see Graph)		
Storage Temperature Range	-55°C to +100°C		
Relative Humidity	MSL Level 1	95% RH	
Case Material	Six-Side Shielded Case		
Package Weight	110 g		
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	700 x 10 <sup>3</sup> hours
(+71°C)		using MIL-HDBK 217F	560 x 10 <sup>3</sup> hours

## Derating-Graph (Ambient Temperature)

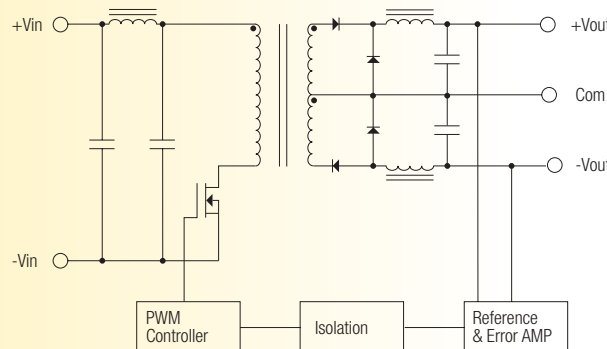


**Simplified Schematic**

### Single Output



### Dual Output

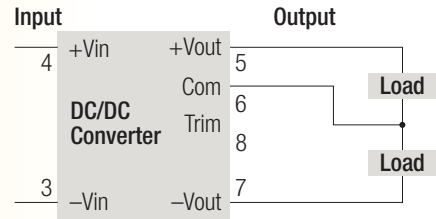
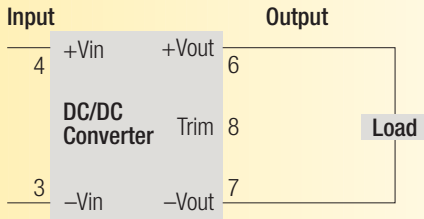


**Typical Characteristics**

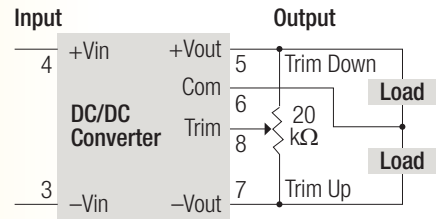
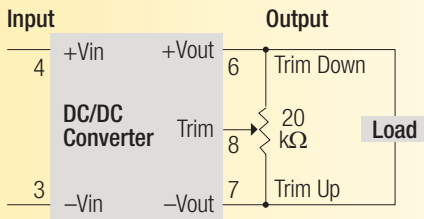
**Single Output**

**Dual Output**

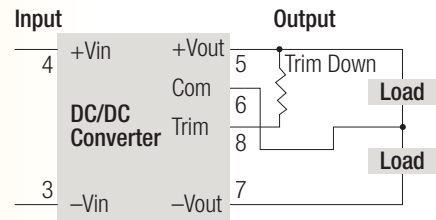
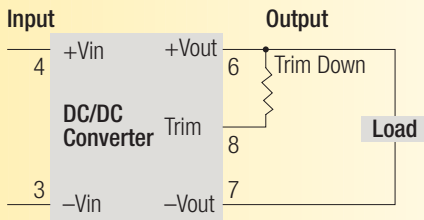
**Fixed Voltage Output**



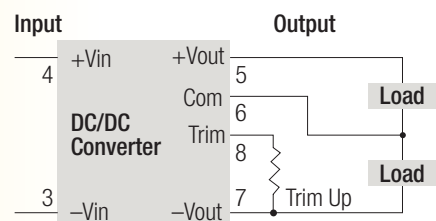
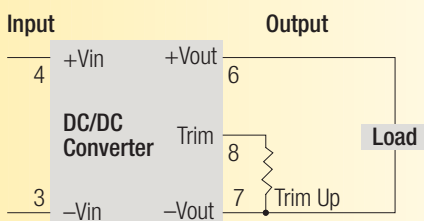
**Trim Connections Using a Trimpot**



**Fixed-Value Trim Down Resistor**

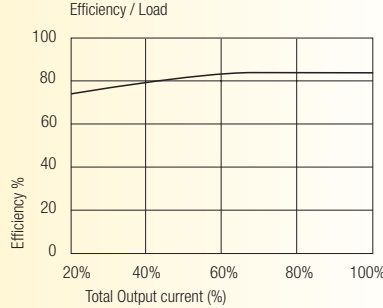


**Fixed-Value Trim Up Resistor**



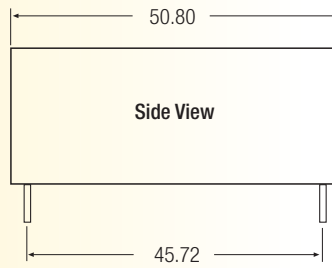
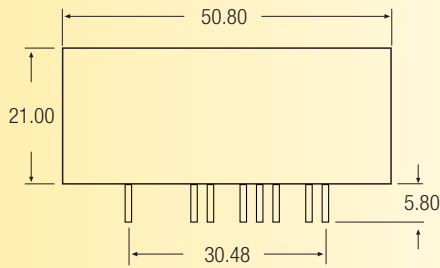
**Typical Characteristics**

## REC20 - types

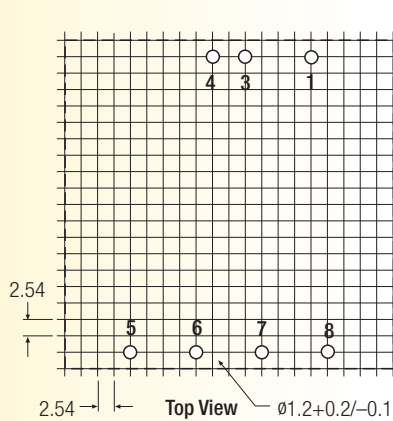
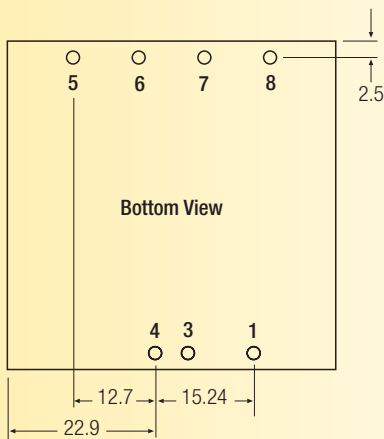


**Package Style and Pinning (mm) 2" x 2", Wide Input 2:1**

2" x 2" PIN Package



**Recommended Footprint Details**



**Pin Connections**

Pin #	Single	Dual
1	Remote On/Off	Remote On/Off
3	-Vin	-Vin
4	+Vin	+Vin
5	No Pin	+ Vout
6	+ Vout	Com
7	- Vout	- Vout
8	Trim	Trim

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

**Remote On/Off Control**

Control Input	Pin 1	Control Common	Pin 3
Control Voltage		Converter Shutdown Idle Current	10mA
ON	> +2.5VDC or Open Circuit	Logic Compatibility	CMOS or Open
Off	> +0.8VDC or Jumper to Pin 3		Collector TTL

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