

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



RECOM

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Input Current ¹⁾ (mA)		Efficiency ²⁾ (%)
				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

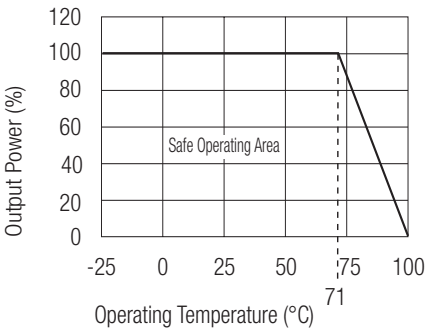
Notes:

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

Specifications (Core Operating Area)

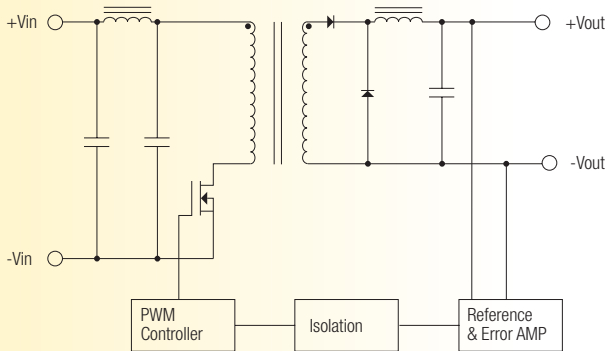
Input Voltage Range			2:1
Output Voltage Accuracy			±2% max.
Line Regulation (HL-LL)			±0.2% max.
Load Regulation (for output load current change from 20% to 100%)			±0.2% max.
Over Voltage Protection			Built-In
External Trim Adjustment Range			±10%
Ripple and Noise (0,1µF capacitor on output, 20MHz 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 10³hours
(+71°C)		using MIL-HDBK 217F	560 x 10³hours

Derating-Graph
(Ambient Temperature)

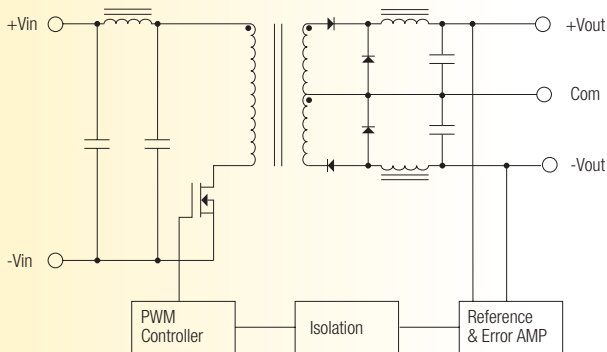


Simplified Schematic

Single Output



Dual Output

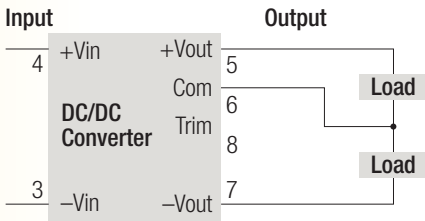
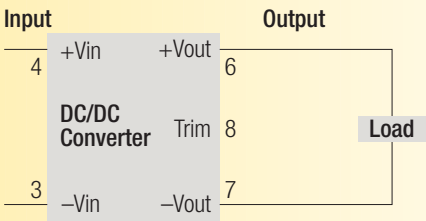


Typical Characteristics

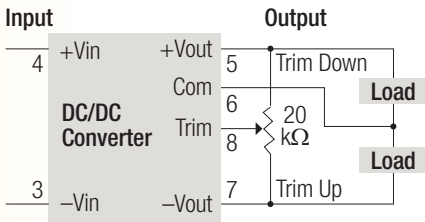
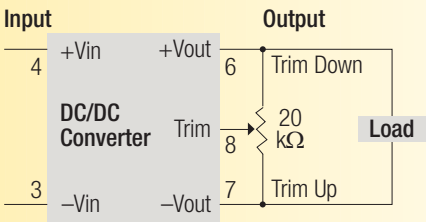
Single Output

Dual Output

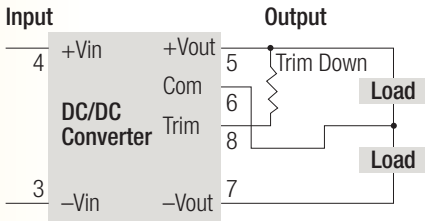
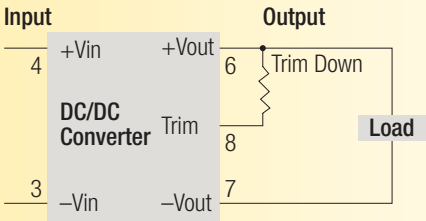
Fixed Voltage Output



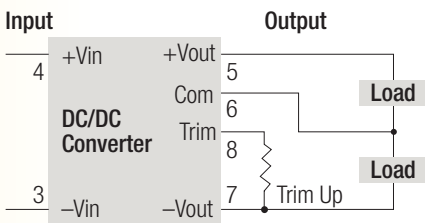
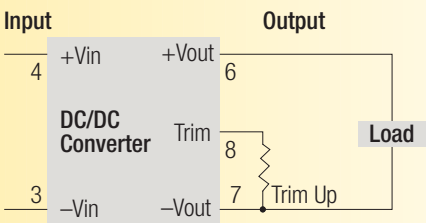
Trim Connections Using a Trimpot



Fixed-Value Trim Down Resistor

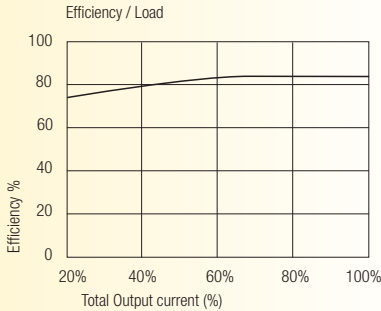


Fixed-Value Trim Up Resistor



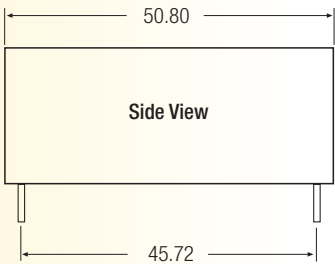
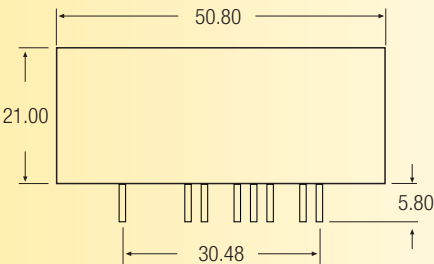
Typical Characteristics

REC20 - types

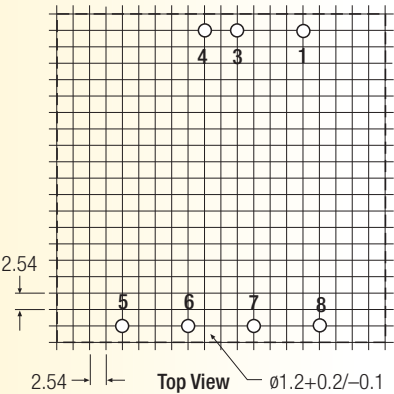
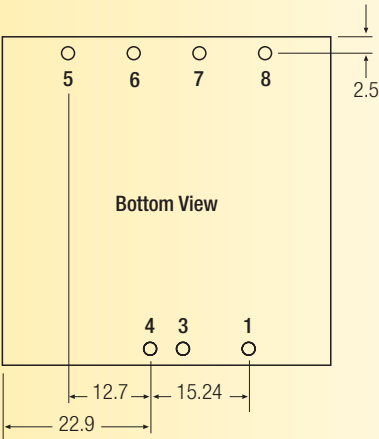


Package Style and Pinning (mm) 2" x 2", Wide Input 2:1

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