

Statronics Power Supplies

Rifala Pty Ltd, ACN 002612473

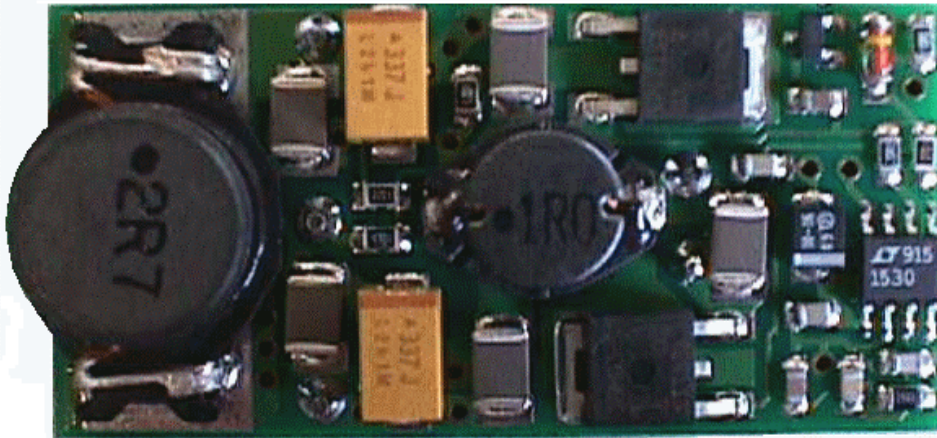


ISO 9001

Units 5 & 6, 26 Leighton Place
HORNSBY NSW 2077
AUSTRALIA.
E-Mail: sales@statronics.com.au

Phone: 61 2 9477 5011
Fax: 61 2 9476 6914
Mobile: 61 4 1941 4392
Web-site: <http://www.statronics.com.au>

R050308 INDUSTRY- STANDARD FOOTPRINT WIDE INPUT RANGE, 3.3V ADJUSTABLE, HIGH-EFFICIENCY DC-DC CONVERTER



R050308 is a compact, efficient, economical, 8A, non-isolated DC-DC Converter with a single output, adjustable from 2.7 to 3.7V with a single external resistor, suitable for mounting as a through hole component on printed circuit boards.

Dimensions:

Width: 25 mm, 1 inch
Height: < 10 mm, <0.4 inches
Length: 51 mm, 2 inches

Features and performance

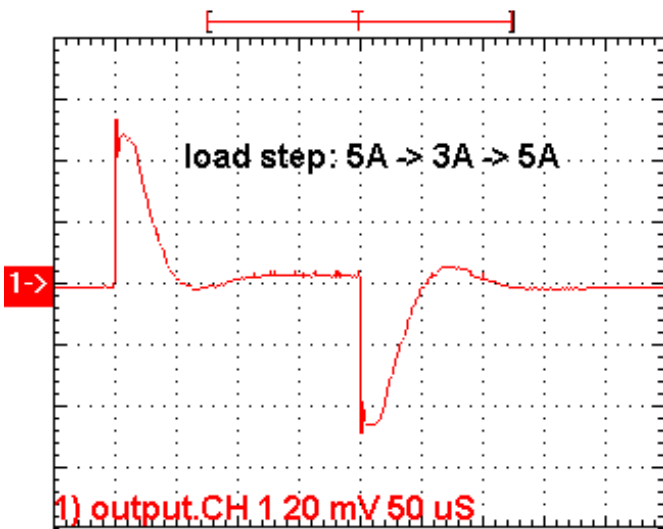
- Cool - >90% efficient.
- User friendly - NO external components necessary (for 3.3V output).
- Overload protected - can be shorted indefinitely.
- **Wide input range** - 4.5V to 7.4V DC. (5V nominal or 6V battery.)
- Compact, low profile outline - less than 10mm total height above motherboard.
- Simple mounting - standard footprint
- Very High reliability - MTBF > 800,000 Hrs (MIL-HDBK 217F G.B.)
- Low input noise - Class A with one 47 μ F low ESR external input capacitor.
- Excellent regulation - post regulation not necessary.
- Soft Start and no overshoot - no "bad habits".
- - will drive most capacitive and non-linear loads.
- Excellent Step Response - <50 μ S Typical, for modern high-speed processors.
- Reliable in hot environment - continuously rated to 60°C, (6A) natural convection.
- Serviceable - Open construction = repairable after the long warranty.

This model is especially suitable for High Reliability Telecommunications, Industrial Process Control, Information Technology Equipment, Distributed Power Systems, Portable IT Equipment, etc., **particularly** where a **wide input range** is required, such as when the DC power source is a 6V battery or poorly regulated 5V. It provides the close regulation and **fast step load response** required by modern processors, with **very high efficiency** and a low parts count.

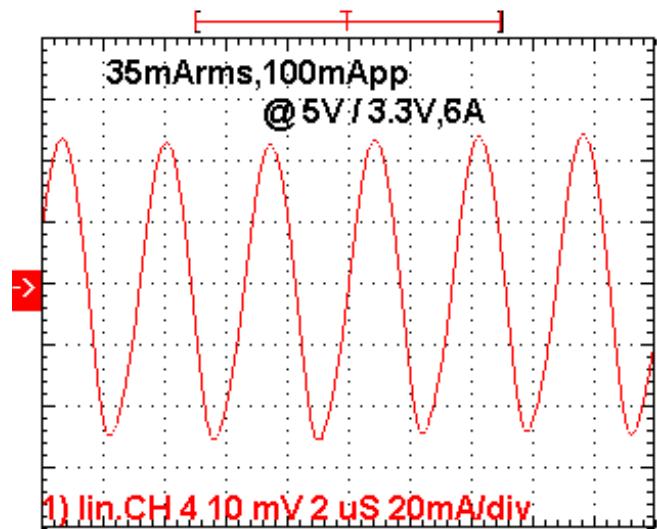
SPECIFICATIONS

DC Output:	3.3V at 8A (40°C convection) 6A (60°C convection)
Output Adjustment:	2.7V to 3.7V with a single external resistor or trimmer
DC Output Power:	26W (8A) at 40°C, 20W (6A) at 60°C, natural convection
Ripple And Noise: (See Curve)	Typically <10mV RMS, <50mV P-P at 6A
Minimum Load:	0 A. No minimum load is required for normal performance.
Load Regulation:	< 0.5% For all loads from 0% to full load
Line Regulation:	< 0.2% For all input voltages from 4.5V to 7.4V DC
Absolute Maximum Input Voltage:	7.5V DC
Voltage Setting accuracy:	3.3V ± 2% at 5V input, 6A load.
Temperature Coefficient:	Any change in output voltage due to warm-up drift and temperature does not exceed regulation limits above.
Short Circuit and Over Current protection:	110% to 130% of full power, indefinite short circuit period.
Over Temperature Protection:	Current limit is modified by switch junction temperature
Reverse Input Protection:	Not provided
Operating Temperature:	0 to 60°C (6A), 0 to 40°C (8A), Relative Humidity 5% to 95%
Shipping and Storage:	-35°C to 105°C , Relative Humidity: 5% to 95%
Withstand Vibration :	5.2G, 3 axes to 400Hz Under operation
Withstand Shock:	28G 3 axes Under operation
Standards, Safety:	IEC 950, IEC65, AS 3260, UL 1950, CSA22.2 No. 950
Standards, EMI:	CISPR 22, AS 3548, FCC, VDE 0871, all Class A conducted (with a single 47μF low ESR external input capacitor).
Input Ripple Current: (See Curve)	< 150mA P-P at 5V input, 3.3V output, 300KHz, 6A output.
Efficiency: (See Curve)	90% to 93% at 3.3V, 6A output.
Step Load Response: (See Curve)	35% to 65% step load < 100mV, Settling Time < 50μS

Step Load Response

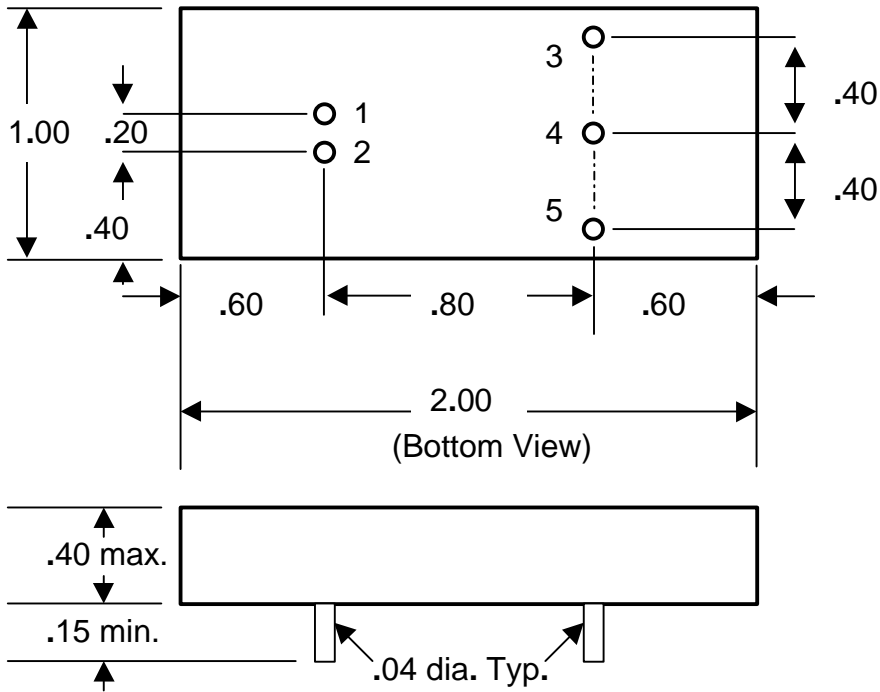


Input Ripple Current



DIMENSIONS (inches)

PIN ASSIGNMENTS

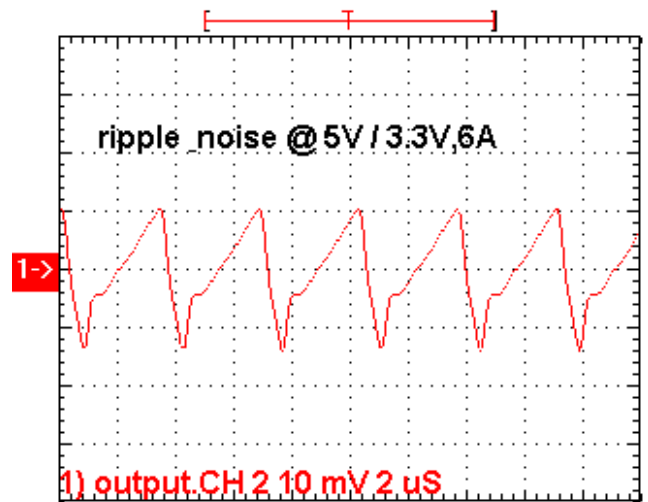
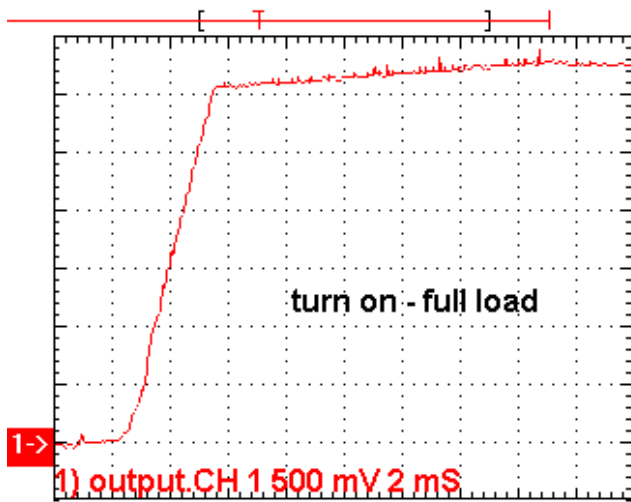


SINGLE OUTPUT

1. + V in
2. - V in
3. + V out
4. Vo Trim
5. - V out

Suggested hole size: .05" (1.27mm)

Output voltage adjustment: Trimmer 500R or 1K , Pins 3,4,5, wiper on 5. Short pin 3 to 4 > 2.7V, Short pin 4 to 5 > 3.7V.



R050308 efficiency

