3.3V Adjustable 8Amp DC-DC

R050308

Features:

- 8A non-isolated converter
- Input 4.5V to 7.4V DC
- PCB Mounting
- Small size for mounting on PCB
- Over current protected
- Short Circuit protected
- Efficiency greater than 90%
- No external components needed
- 5 year warranty

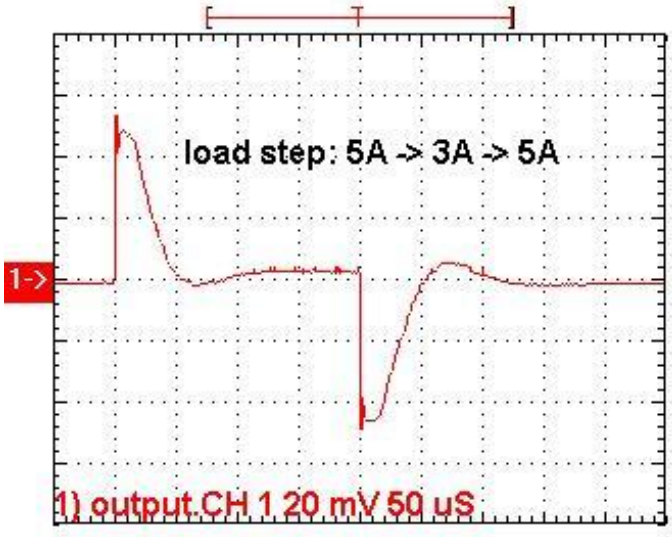
This model is especially suitable for High Reliability Telecommunications, Industrial Process Control, IT Equipment, Distributed Power Systems, and Portable IT Equipment etc; particularly where a wide input range is required, such as when the DC power source is a 6V battery or poorly regulated 5V. It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

AS/NZS ISO 9001 BUREAU VERITAS Certification

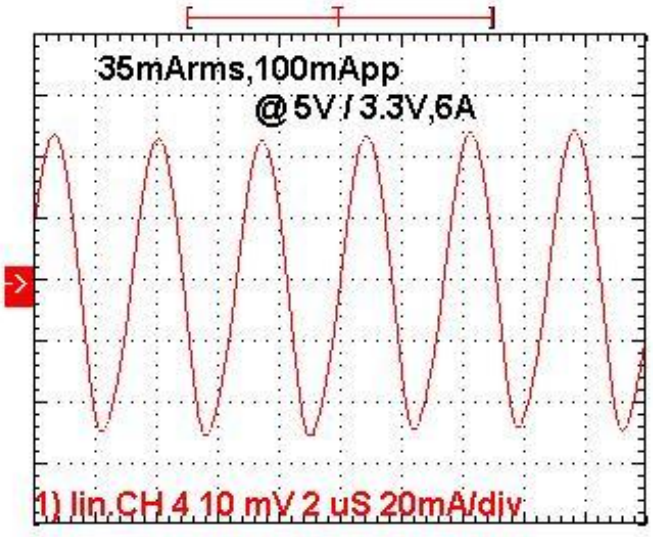
SPECIFICATIONS

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
MTBF:	>800,000 Hrs (MIL-HDBK 217F G.B.)
Step Response:	<50 µS Typical, for modern high-speed processors
Dimensions (W x H x L)	25mm x 10mm x 51mm (1" x 0.4" x 2")

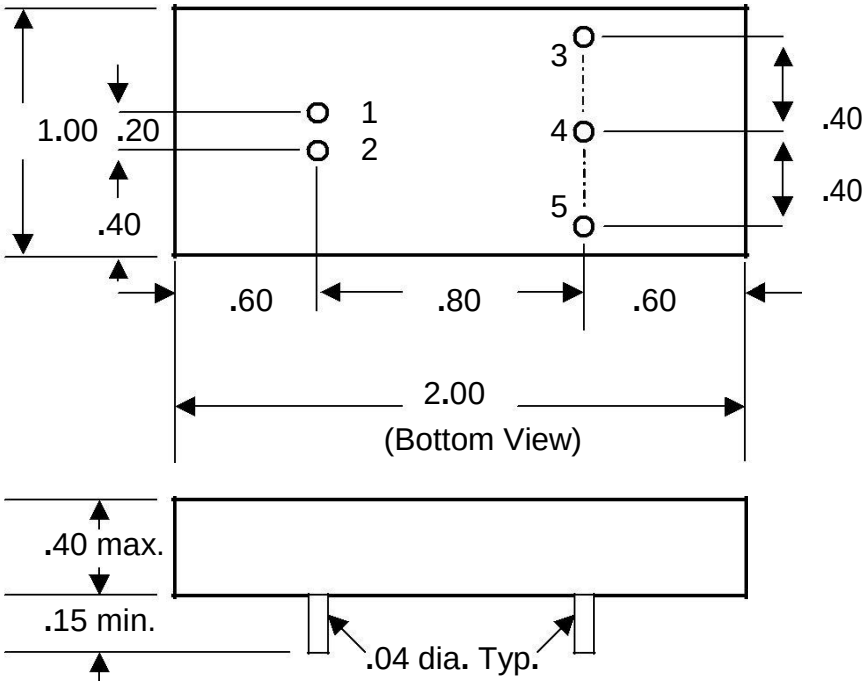
Step Load Response



Input Ripple Current



DRAWING – DIMENSIONS (inches)



Suggested hole size: .05” (1.27mm)

Pin Assignments

SINGLE OUTPUT	
1.	+ V in
2.	– V in
3.	+ V out
4.	Vo Trim
5.	– V out

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.