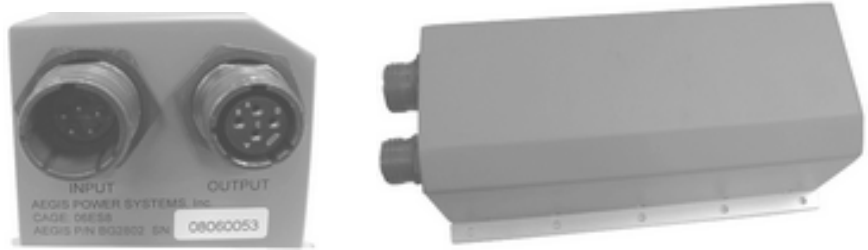


BG2802

DC-DC Power Converter

(Document Rev A09, 2/18/19)



**28Vdc Input
Single Output, 218W Max Total**

Market: Military Cots

Application: Aircraft Electronic Equipment

Features

- 28Vdc per MIL-STD-704A/E/F *
- MIL-STD-1275A/B/D*
- Single Output, 218W
- MIL-STD-810F Environmental *
- MIL-STD-461E EMI *
- Enclosed Case Power Converter

* Designed to meet portions of the standard.
Contact Aegis Power Systems for details.

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	20 to 36	Vdc	
Temperature	-55 to +85	°C	91°C for 30 minutes
Output Power	218	W	See Table 2
Input power	268	W	

Product Highlights

The BG2802 is an enclosed dc-dc power converter with a single 28Vdc output. This military Mil-COTS solution is designed to meet portions of Mil-Std-704A/E/F input requirements, portions of MIL-STD-810F vibration and shock requirements and portions of the MIL-STD-461E EMI requirements. Contact Aegis Power Systems for details concerning military specifications. When compared to power supplies using conventional technology, this enclosed case conduction cooled dc-dc power converter provides users with higher efficiency (80%), lower weight (3 lbs), and higher power (290W surge).

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for Mil-COTS, defense, industrial, telecomm, aircraft, shipboard, rack mount, and electric powered vehicle applications. Contact Aegis Power Systems for details on Mil-Specs that this product is designed to meet.

SPECIFICATIONS

(Typical at 25°C, nominal line and 100% load, unless otherwise specified.)

DC input voltage:	Input range 20Vdc to 36Vdc, 28Vdc nominal. Designed to meet Mil-Std-704A transients. Designed to meet Mil-Std-704A/E/F (Normal and Abnormal Range). Will operate down to 18Vdc with shut down occurring with an input less than 18Vdc, (Automatic restart).
DC input line current:	13.4A Typical @ 20Vdc input. 9.6A Typical @ 28Vdc input.
Input power:	268W typical.
Output power:	See Table 2.
Output voltages:	See Table 2.
Output ripple:	See Table 2.
Current Limit:	Short circuit protected with automatic recovery.
Efficiency:	80% Typical.
Start up time:	500msec Maximum.
Voltage set point:	+/-0.5%.
Line regulation:	+/- 0.15%.
Load regulation:	+/- 1.5%.
Temperature regulation:	+/-0.01%/deg C.
Temperature:	-55°C to +85°C Operating baseplate. 30 minute at 91°C Operating baseplate. -55°C to +100°C Non-operating.
Cooling:	Conduction cooling through baseplate.
Package:	Enclosed covered attached to baseplate.
Dimensions:	3" x 4" x 8.2" (see mechanical drawing).
Weight:	3.0 lb. Max
Connector:	1ea Input: D3899/24WD5PN, Output: D38999/24WC4SN
Fusing:	Not fused. Device is reverse voltage protected with customer provided fuse.
Vibration:	Mil-Std-810F Aircraft. (Contact Aegis on specific specs designed to meet.)
Shock:	Mil-Std-810F Aircraft. (Contact Aegis on specific specs designed to meet.)
Explosive Atmosphere:	Mil-Std-810F Aircraft. (Contact Aegis on specific specs designed to meet.)
Altitude:	50,000 ft Operating.
Humidity:	0-95% non-condensing.
EMI:	Designed to meet Mil-Std-461E (CE102 and CS101).

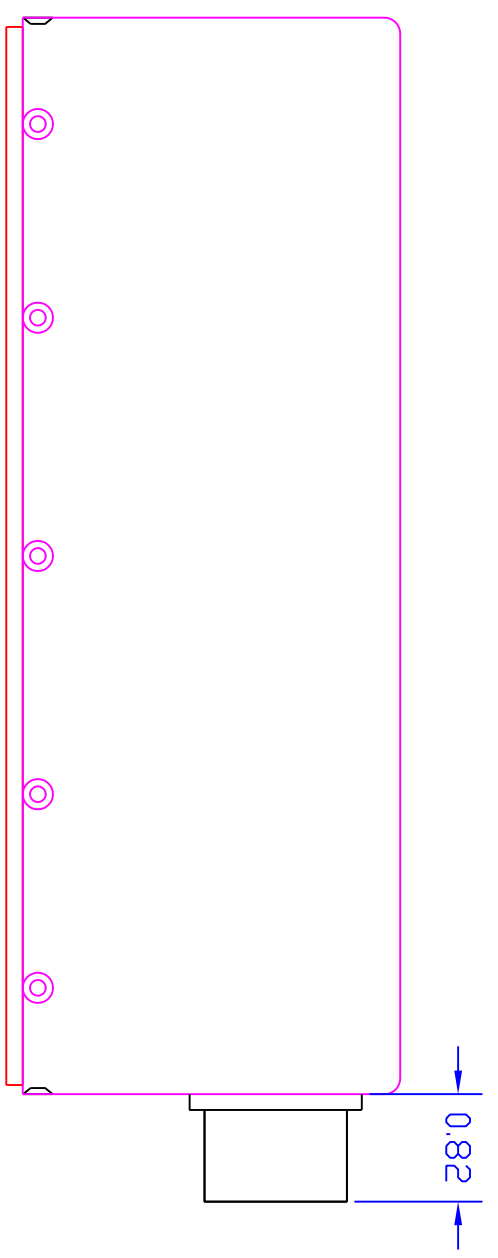
Specifications subject to change without notice.

Table 2: Voltage Outputs

Part Number	Vdc out	Watts out	Amps out	Ripple (20MHz BW)
BG2802	+14.5V	218W	15A*	160mVp-p
BG2802-01	+5V	75W	15A*	100mVp-p

*Current is limited to 13Amps per pin on D38999/24WC4SN

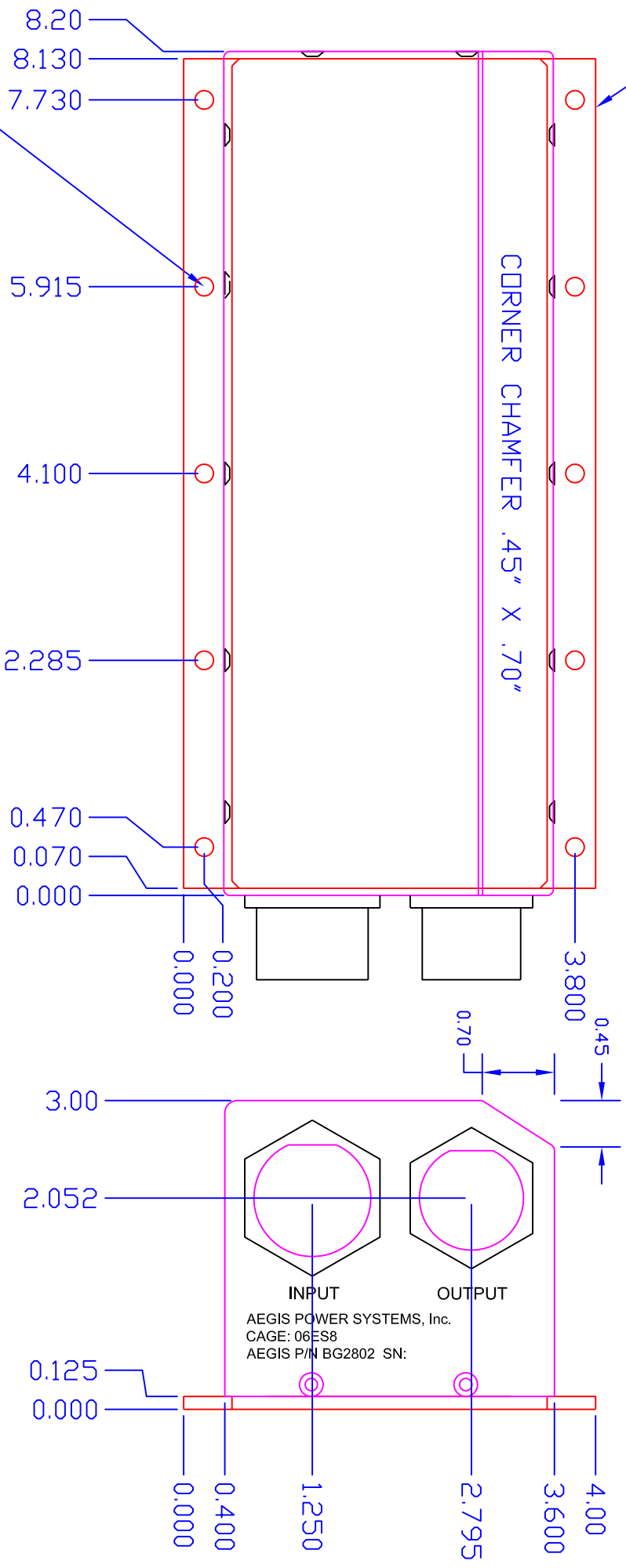
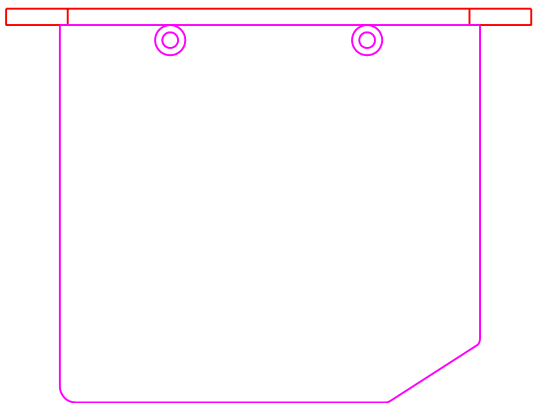
NOTES: UNLESS OTHERWISE SPECIFIED
 1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
 2. MATERIAL: ALUMINUM
 3. COVER FINISH - TOPCOAT FED-STD-595C COLOR NUMBER 36231 (LUSTERLESS GRAY) per PS13630. BASEPLATE - FINISH: CLEAR CHEMICAL FILM (RDHS Compliant) per MIL-C-5541, CLASS 3, 1AW MIL-DLT-81706, TYPE II, CLASS 3.



INPUT CONNECTOR
 D38999/24W/DS/1N
 A - CHASSIS
 B - INPUT POSITIVE
 C - INPUT POSITIVE
 D - INPUT RETURN
 E - INPUT RETURN

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

MOUNTING FLANGE (2X)



INPUT
 AEGIS POWER SYSTEMS, Inc.
 CAGE: 06ES8
 AEGIS P/N BG2802 SN:

MOUNTING HOLES
 10 X Ø 0.18
 FOR #8 SCREW

ZONE	REV	DESCRIPTION	DATE	APPROVED
A01		INITIAL RELEASE	XX/XX/XX	JFS
B01		CHANGE CONN. INCREASE HEIGHT	04-10-08	MRA
B02		CDR RELEASE-ADD CONN PINDUT	04-15-08	MRA

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. FRACTIONS DECIMALS. TOLERANCES ARE: DECIMALS: .5

MATERIAL: N/A		FINISH: SEE NOTE 3	
DRAWN: JFS		DATE: 02/21/08	
CHECKED: []		TITLE: AEGIS P/N: BG2802	
TRGJL ENG		MECHANICAL LAYOUT	
WGT: []		MURPHY, NDRTH CAROLINA	
QUALITY: []		AEGIS POWER SYSTEMS	
APPLICATION: []		CONTRACT NO: []	
NEXT ASSY: []		REPRODUCTION, OR USE OF ANY PART HEREOF MAY BE MADE EXCEPT BY EXPRESS WRITTEN PERMISSION OF AEGIS POWER SYSTEMS, INC.	
USED ON: []		SCALE: 1/1	
APPLICATION: []		SHEET 1 OF 1	