

DC/DC POWER SUPPLIES

SEM-E Power Supplies: Lower Cost, Higher Efficiency

Brandt Electronics, Inc. announces a product line of power supplies in the low profile SEM-E (Standard Electronic Module) format. These power supplies offer the power densities of thick-film hybrid converters at one half the cost.

Surface-mount technology and an innovative thermal design allow these products to provide up to 8 outputs and over 100 watts of output power in a single pitch SEM-E chassis.

Synchronous rectification on the outputs contributes to high efficiency. Efficiency of the DC/DC converter used range up to 86%. Overall efficiencies of the power supplies depends on the combinations of converters used and ranges from over 80% for a 130W power supply with 5 outputs to over 78% for an 8-output 100W power supply.

Initial products offered are 28VDC input per MIL-STD-704. Other input voltages are available upon request. Output voltages range from 1.5 V to 28V. Internal EMI filtering is provided. Approximate dimensions are 5.8" x 6.4" x .58" and approximate weight is 1.5 lbs.



Typical Operating Parameters

Input Voltages	28VDC or 270VDC per MIL-STD-704 (other inputs available)
Output Voltages	Single and multiple, 1.5VDC to 28 VDC
Output Power	>100W
Output Regulation	±1%
Output Ripple	30mV to 250mV
Efficiency	>80% depending of number of outputs
EMI	Internal filtering provided

Typical Design Features

- Ruggedized design
- High-efficiency
- High-reliability
- Low cost
- Low ripple / noise parameters
- Output voltages adjustable ±.5V
- SEM-E available
- Typical operating frequency of 250kHz

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270 VDC Input DC/DC Converter Family					
Output (V)	Output Current Max (I)	Ripple max (mVp-p)	Load Reg. (±%)	Line Reg. (±%)	Efficiency (%)
1.5	45	30	1	1	84
3.3	55	50	1	1	85
* 5	40	50	1	0.5	87
* 8	8.2	50	1	1	83
10	5	50	1	0.5	85
12	3	50	1	0.5	85
15	9	50	1	0.5	88
24	3.5	240	2	1	85
28	1.6	75	1	1	85
-5, -8	0.5, 2.5	50	1	0.5	81
-12, -15	0.5, 1.5	50	1	0.5	82
-8, -15	0.1, 3.9	80, 150	1	1	82
-2, ±15	0.1, 3.3	30, 150	1	1	60

Package Families

200W	4.1" x 2" x .55"
135W	3.8" x 1.9" x .55"
50W	3.1" x 1.7" x .55"

28 VDC Input DC/DC Converter Family					
Output (V)	Output Current Max (I)	Ripple max (mVp-p)	Load Reg. (±%)	Line Reg. (±%)	Efficiency (%)
* 1.5	20	45	1	1	80
1.8	9	45	1	1	78
2	2.5	45	1	1	70
* 3.3	15	50	1	1	83
5	7.5	45	1	1	83
8	1.7	45	1	1	80
10	1.5	60	1	1	84
15	1	100	1	1	83
±15	0.5, 0.12	45	1	1	80

* High & Low power form factors are available

Unpackaged size is approximately 3" x 1.5" x .5"

Notes:

1. Output voltages are adjustable ±0.5V
2. Test data available for many modules
3. Typical operating frequency is 250kHz