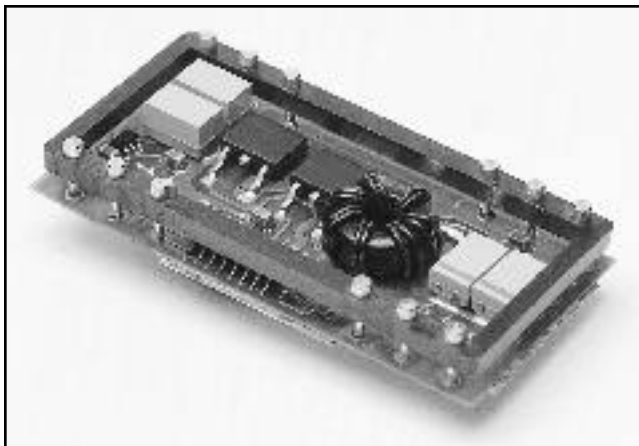


SBC10A-P5

DC-DC CONVERTERS



PATENT PENDING

FEATURES:

- 5-Bit Programmable Output
- 5v To 1.244-3.500V
- Greater Than 91% Efficiency
- Power Good Output
- -40C To +100C Operation
- 1.244V To 3.5V Outputs
- SMD & Thru-Hole Mounting
- Surface Mount & Thru-Hole Types
- Pick & Place Packaging
- Remote On/Off
- Open Frame Construction
- Overvoltage & Short Circuit Protection
- Low Profile 0.315"Ht.

The SBC10A-P5 series of DC-DC converters have been designed as a surface-mount & thru-hole solution for a wide range of applications where low profile and ease of assembly are needed. Utilizing the latest thermal transfer techniques the SBC10A series packs up to 10 Amps of output Current in 1.0" x 2.0" x .315" open frame construction, that's up to 35 Watts @ 55 Watt/in. cubed without the need for additional heat sinking. This 5 Volt input, 5-Bit programmable, 1.244Volts to 3.5Volts, "Synchronous Rectified Converter" has a greater than 91% efficiency, which make this product ideally suited for low voltage applications.

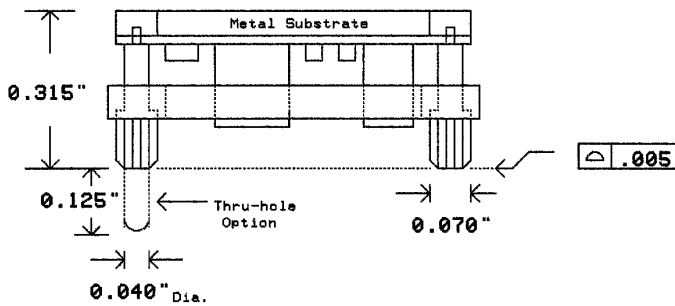
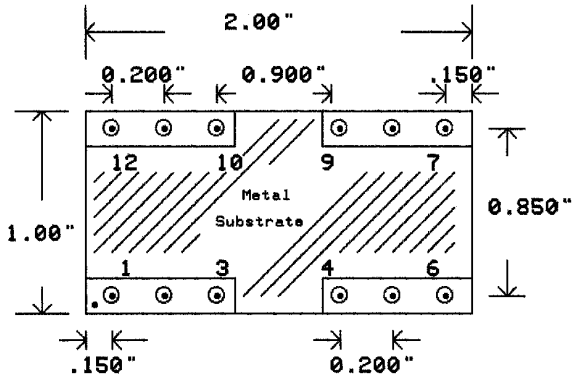
DAC Codes (Note 1)

VID 4	VID 3	VID 2	VID 1	VID 0	Vout
0	1	1	1	1	1.325
0	1	1	1	0	1.375
0	1	1	0	1	1.425
0	1	1	0	0	1.475
0	1	0	1	1	1.525
0	1	0	1	0	1.575
0	1	0	0	1	1.625
0	1	0	0	0	1.675
0	0	1	1	1	1.725
0	0	1	1	0	1.775
0	0	1	0	1	1.825
0	0	1	0	0	1.875
0	0	0	1	1	1.925
0	0	0	1	0	1.975
0	0	0	0	1	2.025
0	0	0	0	0	2.075
1	1	1	1	1	1.247
1	1	1	1	0	2.125
1	1	1	0	1	2.225
1	1	1	0	0	2.325
1	1	0	1	1	2.425
1	1	0	1	0	2.525
1	1	0	0	1	2.625
1	1	0	0	0	2.725
1	0	1	1	1	2.825
1	0	1	1	0	2.925
1	0	1	0	1	3.025
1	0	1	0	0	3.125
1	0	0	1	1	3.225
1	0	0	1	0	3.325
1	0	0	0	1	3.425
1	0	0	0	0	3.525

Note (**) Insert suffix; **SM** for Surface-mount type or **TH** for Thru-hole Type mounting • **MODIFICATIONS AND CUSTOMS AVAILABLE**

10AMP DC-DC

SPECIFICATIONS: All Specifications Are Typical @ Nominal Input, Full Load & 25C Unless Otherwise Stated and are Subject to Change without Notice



PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	+Vin
2	Enable
3	GND
4	GND
5	+Vo
6	+Vo
7	Pwr Good
8	VID 4
9	VID 3
10	VID 0
11	VID 1
12	VID 2

INPUT

Input Voltage (Range)	5Vdc 4.75Vdc - 5.25 Vdc
Under Voltage Lockout	4.6V
Input Capacitance	200uF
Enable	Logic Level "1" or open
Disable	Logic Level "0"

OUTPUT

Output Program Range (Note 1)	+1.247Vdc - +3.525Vdc (see Dac Codes, Sheet 1)
Output Setting Accuracy	+/-1%
Output Current	0.3A - 10A
Load Regulation	+/-1.5%
Line Regulation	+/-0.5%
Ripple & Noise (20Mhz BW)	75mV
Temperature Coefficient	+/-0.01%/c
Transient Response (.3A-10A)	2% Deviation, 75uS
Current Limit	Over Current & Short Circuit

ENVIRONMENTAL

Operating Temperature Range (Note 3)	-40C To +100C -40C To +65C @ FL
Storage Temperature Range	-55C To +125C
Maximum Case Temperature	+110C
Humidity	5% To 95% RH, Non-condensing
Cooling	Natural Convection
Processing	Solder reflow (See profile), water washable

MECHANICAL

Size	1.00" X 2.00" X 0.315"
Weight	0.5oz. (14G)
Mounting	SMD & Through Hole Types
Case/Material	Open-Frame, 94V-0 FR-4 P.C.B., with Bonded Aluminum Substrate

NOTES:

- 1) Output voltage settings are @ No Load. Vo will droop Approximately 15mV @ 10.0A Load
- 2) All measurements were made using an external 330uF/10V low ESR tantalum @ Vin & a 470uF/6.3V low ESR tantalum @ Vo.
- 3) Consult factory for Derating Curve