

**PART NUMBER:** VBS20 series

**DESCRIPTION:** DC/DC converter

**features**

- 6A non-isolated output
- efficiency to 88%
- constant frequency
- over current protection
- regulated outputs
- under input voltage protection
- output voltage adjustment
- remote on/off control



| model number | input voltage | output voltage | output current | input current |           | effic. | case |
|--------------|---------------|----------------|----------------|---------------|-----------|--------|------|
|              |               |                |                | no load       | full load |        |      |
| VBS20-S5-1R2 | 4.5-5.5VDC    | 1.2VDC         | 6A             | 40mA          | 1895mA    | 76%    | B    |
| VBS20-S5-2R1 | 4.5-5.5VDC    | 2.1VDC         | 6A             | 40mA          | 3000mA    | 84%    | B    |
| VBS20-S5-2R5 | 4.5-5.5VDC    | 2.5VDC         | 6A             | 40mA          | 3530mA    | 85%    | B    |
| VBS20-S5-3R3 | 4.5-5.5VDC    | 3.3VDC         | 6A             | 40mA          | 4500mA    | 88%    | B    |

**INPUT**

|                                    |    |                |
|------------------------------------|----|----------------|
| input voltage range <sup>1</sup>   | 5V | 4.5V-5.5V      |
| input filter type                  |    | capacitive     |
| remote on/off control <sup>2</sup> |    | positive logic |

**OUTPUT**

|                              |                              |
|------------------------------|------------------------------|
| voltage accuracy             | ±1% max.                     |
| external trim adj. range     | ±10%                         |
| ripple & noise               | 20MHz BW, w/ 0.1µF on output |
| temperature coefficient      | 75mV pk-pk., max             |
| over circuit protection      | ±0.05%/°C                    |
| line regulation <sup>3</sup> | auto recovery                |
| load regulation <sup>4</sup> | ±0.5% max                    |
| current limit                | ±0.5% max                    |
|                              | 120-150% nominal output      |

**GENERAL SPECIFICATIONS**

|                             |  |
|-----------------------------|--|
| efficiency                  | see table                                |
| switching frequency         | 200KHz, typical                          |
| operating temperature range | -25°C to +71°C                           |
| case temperature            | 95°C max.                                |
| storage temperature         | -40°C to +105°C                          |
| dimensions                  | 2.0x1.0x0.4 inches<br>(50.8x25.4x10.2mm) |
| case material               | non-conductive black plastic             |

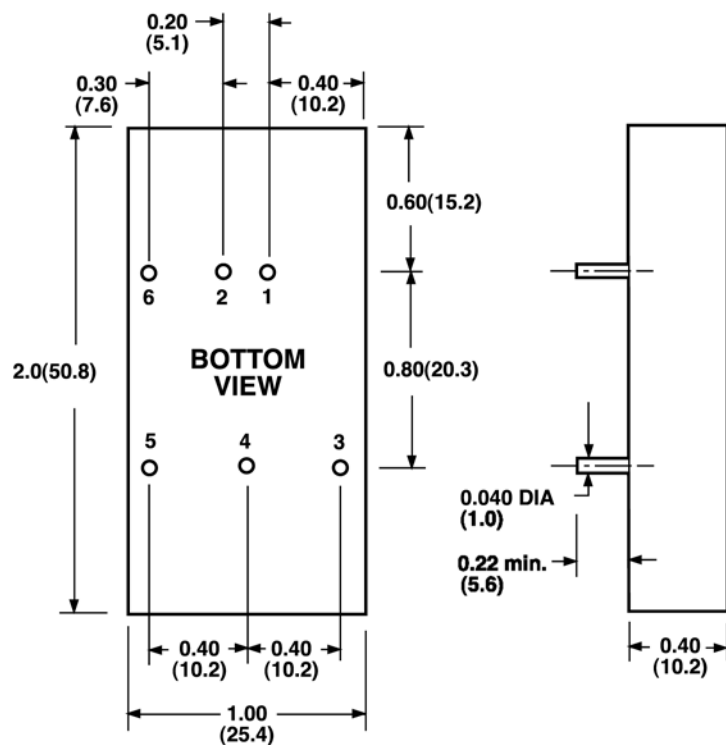
**NOTES:**

1. Input requires a 470uF cap to meet specifications.
2. Logic compatibility with open collector TTL or CMOS.
3. Measured from high line to low line
4. Measured from full load to 10% load

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## DIMENSIONS (mm)



### PIN CONNECTION

| Pin | Function      |
|-----|---------------|
| 1.  | +Input        |
| 2.  | -Input        |
| 3.  | +Output       |
| 4.  | Trim          |
| 5.  | -Output       |
| 6.  | Remote ON/OFF |

## DERATING CURVE

