

**KEY FEATURES**

- Power Module for PCB Mountable
- 2:1 & 4:1 Wide Input Range
- Regulated Output
- Low Ripple and Noise
- 2-Years Product Warranty


**ELECTRICAL SPECIFICATIONS**

| Model No. ( Single Output ) | SB08-12-3.3S | SB08-12-5S  | SB08-12-12S | SB08-12-15S | SB08-12-24S |
|-----------------------------|--------------|-------------|-------------|-------------|-------------|
| Input Voltage (V.DC.)       | 12V (9-18V)  | 12V (9-18V) | 12V (9-18V) | 12V (9-18V) | 12V (9-18V) |
| Output Voltage (V.DC.)      | 3.3V/2000mA  | 5V/1500mA   | 12V/666mA   | 15V/533mA   | 24V/333mA   |
| Efficiency                  | 67%          | 69%         | 76%         | 75%         | 68%         |
| Minimum Load                | 4%           | 3%          | 5%          | 5%          | 4%          |

| Model No. ( Single Output ) | SB08-24-3.3S | SB08-24-5S   | SB08-24-12S  | SB08-24-15S  | SB08-24-24S  |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| Input Voltage (V.DC.)       | 24V (18-36V) | 24V (18-36V) | 24V (18-36V) | 24V (18-36V) | 24V (18-36V) |
| Output Voltage (V.DC.)      | 3.3V/2000mA  | 5V/1500mA    | 12V/666mA    | 15V/533mA    | 24V/333mA    |
| Efficiency                  | 72%          | 73%          | 80%          | 80%          | 77%          |
| Minimum Load                | 3%           | 3%           | 4%           | 4%           | 4%           |

| Model No. ( Single Output ) | SB08-24F-5S | SB08-24F-12S | SB08-24F-15S |
|-----------------------------|-------------|--------------|--------------|
| Input Voltage (V.DC.)       | 24V (9-36V) | 24V (9-36V)  | 24V (9-36V)  |
| Output Voltage (V.DC.)      | 5V/1500mA   | 12V/666mA    | 15V/533mA    |
| Efficiency                  | 66%         | 72%          | 71%          |
| Minimum Load                | 4%          | 5%           | 5%           |

| Model No. ( Single Output ) | SB08-48-3.3S | SB08-48-5S   | SB08-48-12S  | SB08-48-15S  | SB08-48-24S  |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| Input Voltage (V.DC.)       | 48V (36-75V) | 48V (36-75V) | 48V (36-75V) | 48V (36-75V) | 48V (36-75V) |
| Output Voltage (V.DC.)      | 3.3V/2000mA  | 5V/1500mA    | 12V/666mA    | 15V/533mA    | 24V/333mA    |
| Efficiency                  | 73%          | 74%          | 80%          | 80%          | 79%          |
| Minimum Load                | 3%           | 3%           | 4%           | 4%           | 4%           |

| Model No. ( Single Output ) | SB08-48F-5S  |
|-----------------------------|--------------|
| Input Voltage (V.DC.)       | 48V (18-75V) |
| Output Voltage (V.DC.)      | 5V/1500mA    |
| Efficiency                  | 73%          |

| Model No. ( Dual Output ) | SB08-12-5D   | SB08-12-12D  | SB08-12-15D  |
|---------------------------|--------------|--------------|--------------|
| Input Voltage (V.DC.)     | 12V (9-18V)  | 12V (9-18V)  | 12V (9-18V)  |
| Output Voltage (V.DC.)    | ±5V / ±800mA | ±12 / ±333mA | ±15 / ±267mA |
| Efficiency                | 70%          | 75%          | 74%          |
| Minimum Load              | 4%           | 5%           | 5%           |

| Model No. ( Dual Output ) | SB08-24-5D   | SB08-24-12D  | SB08-24-15D  |
|---------------------------|--------------|--------------|--------------|
| Input Voltage (V.DC.)     | 24V (18-36V) | 24V (18-36V) | 24V (18-36V) |
| Output Voltage (V.DC.)    | ±5V / ±800mA | ±12 / ±333mA | ±15 / ±267mA |
| Efficiency                | 73%          | 78%          | 74%          |
| Minimum Load              | 2%           | 5%           | 6%           |

| Model No. ( Dual Output ) | SB08-24F-15D |
|---------------------------|--------------|
| Input Voltage (V.DC.)     | 24V (9-36V)  |
| Output Voltage (V.DC.)    | ±15 / ±267mA |
| Efficiency                | 74%          |

| Model No. ( Dual Output ) | SB08-48-5D   | SB08-48-12D  | SB08-48-15D  |
|---------------------------|--------------|--------------|--------------|
| Input Voltage (V.DC.)     | 48V (36-75V) | 48V (36-75V) | 48V (36-75V) |
| Output Voltage (V.DC.)    | ±5V / ±800mA | ±12 / ±333mA | ±15 / ±267mA |
| Efficiency                | 73%          | 77%          | 74%          |
| Minimum Load              | 4%           | 5%           | 3%           |

**SB08 SERIES**
**8 Watts**

|                             |  |   |  |  |  |     |
|-----------------------------|--|---|--|--|--|-----|
| Model No. ( Single Output ) | SB08-12-3.3S<br>SB08-24--3.3S<br>SB08-24--3.3S | SB08-12-5S<br>SB08-24--5S<br>SB08-24F-5S<br>SB08-48-5S<br>SB08-48F-5S | SB08-12-12S<br>SB08-24--12S<br>SB08-24F-12S<br>SB08-48-12S | SB08-12-15S<br>SB08-24--15S<br>SB08-24F-15S<br>SB08-48-15S | SB08-12-24S<br>SB08-24--24S<br>SB08-48-24S |     |
| Max Output Wattage (W)      | 6.6W   | 7.5W  | 8W   | 8W   | 8W   |     |
| Input                       | Input Filter L-C type                          |   |  |  |  |     |
| Output                      | Voltage (V.DC.)                                | 3.3   | 5  | 12   | 15   | 24  |
|                             | Voltage Accuracy                               | ±2%   |  |  |  |     |
|                             | Current (mA) max                               | 2000  | 1500   | 666  | 533  | 333 |
|                             | Line Regulation (LL-HL) (typ.)                 | ±0.5%   |  |  |  |     |
|                             | Load Regulation (10-100%) (typ.)               | ±3%   | ±1%  | ±1%  | ±1%  | ±1% |
|                             | Ripple   | <0.2% Vout +20mV max (Vp-p)   |  |  |  |     |
|                             | Noise  | <0.5% Vout +50mV max (Vp-p)   |  |  |  |     |
| Protection                  | Switching Frequency                            | 300KHz  |  |  |  |     |
|                             | Over Power Protection                          | Works over 120% of rating and recovers automatically.                 |  |  |  |     |
| Isolation                   | Short Circuit Protection                       | Current limit, auto-recovery  |  |  |  |     |
|                             | Voltage  | 1600 VDC.   |  |  |  |     |
| Environment                 | Resistance                                     | 10 <sup>8</sup> ohms  |  |  |  |     |
|                             | Capacitance                                    | 1000 pF   |  |  |  |     |
|                             | Operating Temperature                          | -25°C...+70°C (with derating)   |  |  |  |     |
|                             | Storage Temperature                            | -55°C...+105°C  |  |  |  |     |
|                             | Case Temperature                               | +100°C max.   |  |  |  |     |
|                             | Temperature Coefficient                        | ±0.02% Per°C  |  |  |  |     |
| Physical                    | Humidity                                       | 95% RH  |  |  |  |     |
|                             | MTBF   | >800,000 h @ 25°C (MIL-HDBK-217F)                                     |  |  |  |     |
|                             | Dimension (L x W x H)                          | 1.25 x 0.8 x 0.4 Inches ( 31.8 x 20.3 x 10.2 mm ) Tolerance ±0.5 mm   |  |  |  |     |
|                             | Case Material                                  | Six-side shielded Aluminum with Non-Conductive base, Black Anodize    |  |  |  |     |
|                             | Weight   | 13 g  |  |  |  |     |
|                             | Cooling Method                                 | Free-air convection   |  |  |  |     |

1.All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

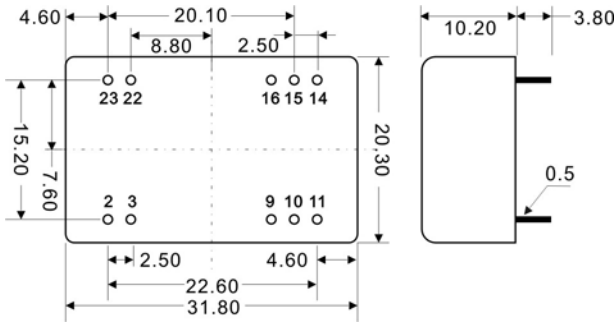
2.Ripple &amp; Noise are measured at 20MHz of bandwidth with 0.1µF &amp; 47µF parallel capacitor.

|                           |   |   |  |      |
|---------------------------|---|---|--|------|
| Model No. ( Dual Output ) | SB08-12-5D<br>SB08-24--5D<br>SB08-48-5D | SB08-12-12D<br>SB08-24--12D<br>SB08-48-12D                          | SB08-12-15D<br>SB08-24--15D<br>SB08-24F-15D<br>SB08-48-15D |      |
| Max Output Wattage (W)    | 8W                                      | 8W  | 8W   |      |
| Input                     | Input Filter L-C type                   |   |  |      |
| Output                    | Voltage (V.DC.)                         | ±5  | ±12  | ±15  |
|                           | Voltage Accuracy                        | ±2%   |  |      |
|                           | Current (mA) max                        | ±800  | ±333   | ±267 |
|                           | Line Regulation (LL-HL) (typ.)          | ±0.5%   |  |      |
|                           | Load Regulation (10-100%) (typ.)        | ±1%   | ±1%  | ±1%  |
|                           | Ripple                                  | <0.2% Vout +20mV max (Vp-p)   |  |      |
|                           | Noise                                   | <0.5% Vout +50mV max (Vp-p)   |  |      |
| Protection                | Switching Frequency                     | 300KHz  |  |      |
|                           | Over Power Protection                   | Works over 120% of rating and recovers automatically.               |  |      |
| Isolation                 | Short Circuit Protection                | Current limit, auto-recovery  |  |      |
|                           | Voltage                                 | 1600 VDC.   |  |      |
| Environment               | Resistance                              | 10 <sup>8</sup> ohms  |  |      |
|                           | Capacitance                             | 1000 pF   |  |      |
|                           | Operating Temperature                   | -25°C...+70°C (with derating)                                       |  |      |
|                           | Storage Temperature                     | -55°C...+105°C  |  |      |
|                           | Case Temperature                        | +100°C max.   |  |      |
|                           | Temperature Coefficient                 | ±0.02% Per°C  |  |      |
| Physical                  | Humidity                                | 95% RH  |  |      |
|                           | MTBF                                    | >800,000 h @ 25°C (MIL-HDBK-217F)                                   |  |      |
|                           | Dimension (L x W x H)                   | 1.25 x 0.8 x 0.4 Inches ( 31.8 x 20.3 x 10.2 mm ) Tolerance ±0.5 mm |  |      |
|                           | Case Material                           | Six-side shielded Aluminum with Non-Conductive base, Black Anodize  |  |      |
|                           | Weight                                  | 13 g  |  |      |
|                           | Cooling Method                          | Free-air convection   |  |      |

1.All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

2.Ripple &amp; Noise are measured at 20MHz of bandwidth with 0.1µF &amp; 47µF parallel capacitor.

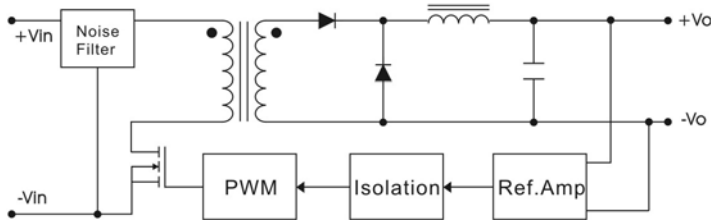
**MECHANICAL DIMENSION ( Top View )**



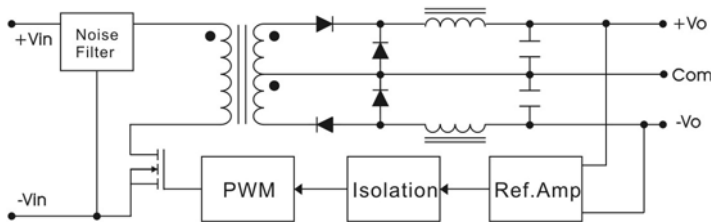
| PIN# | Single | Dual   |
|------|--------|--------|
| 2    | -VIN   | -VIN   |
| 3    | -VIN   | -VIN   |
| 9    | NC     | COMMON |
| 10   | NC     | NC     |
| 11   | NC     | -VOUT  |
| 14   | +VOUT  | +VOUT  |
| 15   | NC     | NC     |
| 16   | -VOUT  | COMMON |
| 22   | +VIN   | +VIN   |
| 23   | +VIN   | +VIN   |

**BLOCK DIAGRAM**

**Single Output**



**Dual Output**



**DERATING**

