

### 1. Features :

|                                               |                                                                                    |
|-----------------------------------------------|------------------------------------------------------------------------------------|
| ■ Wide 2:1 Input Range                        |  |
| ■ Low Ripple and Noise                        |                                                                                    |
| ■ Input / Output Isolation 1.5K Vdc or 3K Vdc |                                                                                    |
| ■ 100 % Burn-In                               |                                                                                    |
| ■ Input p - Filter                            |                                                                                    |
| ■ Custom Design Available                     |                                                                                    |

### 2. Absolute maximum ratings:

( Exceeding these values may damage the module. [These are not continuous operating ratings](#) )

| Parameter                            | Condition           | Min.                      | Typ. | Max. | Unit |
|--------------------------------------|---------------------|---------------------------|------|------|------|
| Input <b>Absolute</b> Voltage Range  | 12V Input Model     | -0.7                      | 12   | 22.5 | Vdc  |
|                                      | 24V Input Model     | -0.7                      | 24   | 45   |      |
|                                      | 48V Input Model     | -0.7                      | 48   | 90   |      |
| Output Short circuit duration        | Nominal Input Range | Indefinite & Auto-Restart |      |      |      |
| Reverse Polarity Input current Limit | ---                 | ---                       | ---  | 1    | A    |
| Operating temperature                | Output Full Load    | -25                       | ---  | +71  | Deg  |
| Storage temperature                  |                     | -55                       | ---  | +125 |      |

### 3. Nominal Input / Output Electrical Specifications :

( Specifications typical at Ta = +25°C, nominal input voltage, rated output current unless otherwise noted )

| Parameter               | Condition                | Min. | Typ.   | Max.   | Unit  |
|-------------------------|--------------------------|------|--------|--------|-------|
| Input Voltage Range     | 12V Input Model          | 9    | 12     | 18     | Vdc   |
|                         | 24V Input Model          | 18   | 24     | 36     |       |
|                         | 48V Input Model          | 36   | 48     | 72     |       |
| Line Regulation         | Output full Load         | ---  | ---    | ± 0.5  | %     |
| Load Regulation         | Single Output Model      | ---  | ---    | ± 0.5  |       |
|                         | Dual Output Model        |      |        | ± 2    |       |
| Output Voltage Accuracy | Nominal Input            | ---  | ---    | ± 1.0  |       |
| Output Voltage Balance  | Dual Output at same Load | ---  | ---    | ± 1.0  |       |
| Switching Frequency     | Nominal Input            | ---  | 250    | ---    | KHz   |
| Temperature Coefficient |                          | ---  | ± 0.01 | ± 0.02 | % / ° |
| Isolation Voltage       | Standard Series          | 1500 | ---    | ---    | Vdc   |
|                         | High Isolation Series    | 3000 | ---    | ---    |       |
| Isolation Resistance    | 500 Vdc                  | 1000 | ---    | ---    | M?    |
| Isolation Capacitance   | 1 KHz / 250 mV rms       | ---  | 350    | ---    | pF    |

#### 4. Single Output Selection Guide

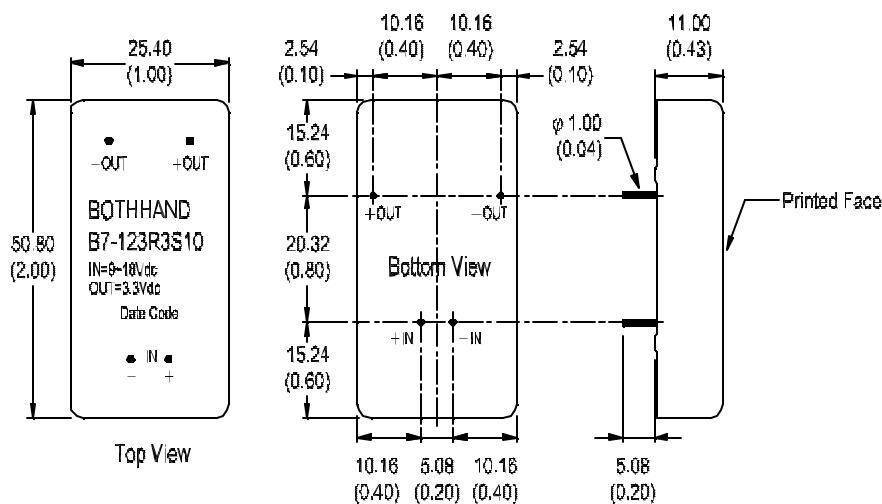
( Specifications typical at  $T_a = +25^{\circ}\text{C}$ , Nominal input voltage, Rated output current unless otherwise noted )

| Bothhand Model No.               | Input Voltage (Vdc) | Output Voltage (Vdc) | Output Current (mA) Max | Input Current @ No Load (mA) Typ. | Input Current @ Max. Load (mA) Typ. | Output Ripple (mV) Max. | Load Regulation (%) Max. | Efficiency (%) Typ. |
|----------------------------------|---------------------|----------------------|-------------------------|-----------------------------------|-------------------------------------|-------------------------|--------------------------|---------------------|
| <b>10 W Single output Series</b> |                     |                      |                         |                                   |                                     |                         |                          |                     |
| B7-123R3S10                      | 9 ~ 18              | 3.3                  | 2500                    | 20                                | 870                                 | 50                      | ± 0.5                    | 79                  |
| B7-1205S10                       |                     | 5.0                  | 2000                    | 25                                | 1042                                | 50                      | ± 0.5                    | 80                  |
| B7-2405S10                       | 18 ~ 36             | 5.0                  | 2000                    | 13                                | 514                                 | 50                      | ± 0.5                    | 81                  |
| B7-2412S10                       |                     | 12.0                 | 800                     | 15                                | 482                                 | 100                     | ± 0.5                    | 83                  |
| B7-4805S10                       | 36 ~ 72             | 5.0                  | 2000                    | 7                                 | 260                                 | 50                      | ± 0.5                    | 80                  |
| <b>15 W Single output Series</b> |                     |                      |                         |                                   |                                     |                         |                          |                     |
| B7-1205S15                       | 9 ~ 18              | 5.0                  | 3000                    | 22                                | 1582                                | 50                      | ± 0.5                    | 79                  |
| B7-1212S15                       |                     | 12.0                 | 1250                    | 30                                | 1543                                | 100                     | ± 0.5                    | 81                  |
| B7-2405S15                       | 18 ~ 36             | 5.0                  | 3000                    | 17                                | 781                                 | 50                      | ± 0.5                    | 80                  |
| B7-2412S15                       |                     | 12.0                 | 1250                    | 20                                | 762                                 | 100                     | ± 0.5                    | 82                  |
| B7-4805S15                       | 36 ~ 72             | 5.0                  | 3000                    | 12                                | 396                                 | 50                      | ± 0.5                    | 79                  |
| B7-4812S15                       |                     | 12.0                 | 1250                    | 15                                | 381                                 | 100                     | ± 0.5                    | 82                  |
| B7-xxxxSxx                       |                     |                      |                         |                                   |                                     |                         |                          |                     |

Notes :

- Standard output Voltage is 3.3V, 5V, 9V, 12V, 15V, **B7-xxxxSxx** is for Customer Design.
- Suffix “**H**” for 3K Vdc Isolation. ( **B7-xxxxSxxH** )

### Mechanical( Single O/P )



Units : mm ( inch )

Tolerance : .xx  $\pm$  0.25

 $(\pm 0.01)$

## 5. Dual Output Selection Guide

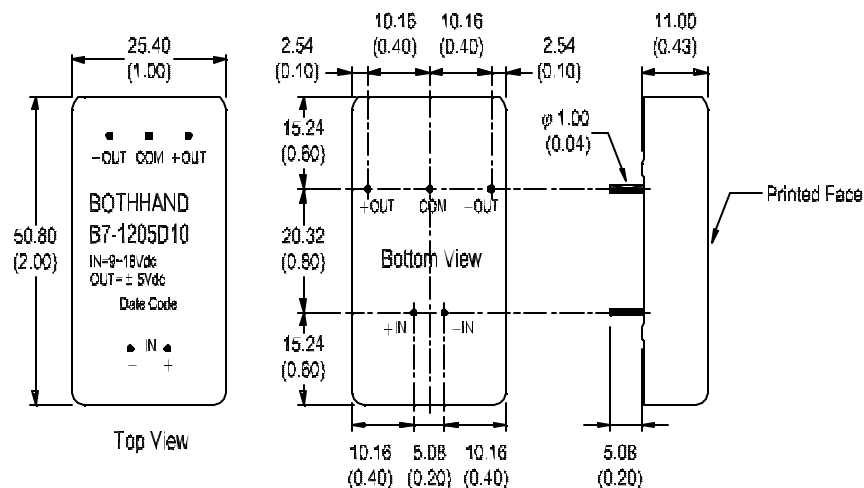
( Specifications typical at Ta = +25°C, Nominal input voltage, Rated output current unless otherwise noted )

| Bothhand<br>Model No.     | Input<br>Voltage<br>(Vdc) | Output<br>Voltage<br>(Vdc) | Output<br>Current<br>(mA) Max | Input Current<br>@ No Load<br>(mA) Typ. | Input Current<br>@ Max. Load<br>(mA) Typ. | Output<br>Ripple<br>(mV) Max. | Load<br>Regulation<br>(%) Max. | Efficiency<br>(%) Typ. |
|---------------------------|---------------------------|----------------------------|-------------------------------|-----------------------------------------|-------------------------------------------|-------------------------------|--------------------------------|------------------------|
| 10 W Dual output Series   |                           |                            |                               |                                         |                                           |                               |                                |                        |
| B7-1205D10                | 9 ~18                     | ± 5.0                      | ± 1000                        | 27                                      | 1068                                      | 50                            | ±2                             | 78                     |
| B7-2405D10                | 18 ~ 36                   | ± 5.0                      | ± 1000                        | 18                                      | 527                                       | 50                            | ±2                             | 79                     |
| B7-2415D10                |                           | ± 15.0                     | ± 325                         | 20                                      | 495                                       | 120                           | ±2                             | 82                     |
| B7-4805D10                | 36 ~ 72                   | ± 5.0                      | ± 1000                        | 12                                      | 260                                       | 50                            | ±2                             | 80                     |
| B7-4815D10                |                           | ± 15.0                     | ± 325                         | 15                                      | 254                                       | 120                           | ±2                             | 80                     |
| 15 W Single output Series |                           |                            |                               |                                         |                                           |                               |                                |                        |
| B7-1205D15                | 9 ~ 18                    | ± 5.0                      | ± 1500                        | 27                                      | 1603                                      | 50                            | ±2                             | 78                     |
| B7-1212D15                |                           | ± 12.0                     | ± 625                         | 32                                      | 1563                                      | 100                           | ±2                             | 80                     |
| B7-2405D15                | 18 ~ 36                   | ± 5.0                      | ± 1500                        | 20                                      | 791                                       | 50                            | ±2                             | 79                     |
| B7-2412D15                |                           | ± 12.0                     | ± 625                         | 22                                      | 772                                       | 100                           | ±2                             | 81                     |
| B7-4805D15                | 36 ~ 72                   | ± 5.0                      | ± 1500                        | 12                                      | 396                                       | 50                            | ±2                             | 79                     |
| B7-4815D15                |                           | ± 15.0                     | ± 500                         | 15                                      | 381                                       | 120                           | ±2                             | 82                     |
| B7-xxxxDxx                |                           |                            |                               |                                         |                                           |                               |                                |                        |

Notes :

- Standard output Voltage is 3.3V, 5V, 9V, 12V, 15V, B7-xxxxDxx is for Customer Design.
- Suffix “H” for 3K Vdc Isolation. ( B7-xxxxDxxH )

## Mechanical( Dual O/P )



Units : mm ( inch )

Tolerance : .xx  $\pm$  0.25

 $(\pm 0.01)$