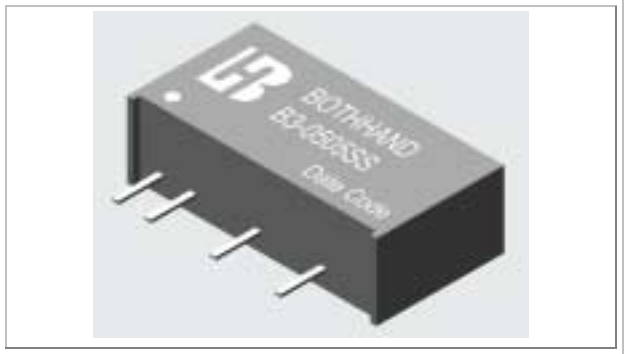


1. Features :

| |
|---|
| ■ 7 Pin SIL Package |
| ■ Low Ripple and Noise |
| ■ Input / Output Isolation 1K Vdc or 3K Vdc |
| ■ 100 % Burn-In |
| ■ Input Filter with Internal Capacitor |
| ■ 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 Absolute Voltage Range | 5V Input Model | -0.7 | 5 | 7.5 | Vdc |
| | 12V Input Model | -0.7 | 12 | 15 | |
| | 24V Input Model | -0.7 | 24 | 30 | |
| Max. Output power | | --- | --- | 2 | W |
| Output Short circuit duration | | --- | --- | 1.0 | Second |
| Operating temperature | Output Full Load | -40 | --- | +85 | °C |
| Storage temperature | | -55 | --- | +105 | |

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 | 5V Input Model | 4.5 | 5 | 5.5 | Vdc |
| | 12V Input Model | 10.8 | 12 | 13.2 | |
| | 24V Input Model | 21.6 | 24 | 26.4 | |
| Output Voltage Accuracy | Nominal Input | --- | --- | ± 5.0 | % |
| Output Voltage Balance | Dual Output same Load | --- | --- | ± 1.0 | |
| Switching Frequency | Nominal Input | --- | 110 | --- | KHz |
| Temperature Coefficient | | --- | ± 0.01 | ± 0.02 | % / °C |
| Isolation Voltage | Standard Series | 1000 | --- | --- | Vdc |
| | High Isolation Series | 3000 | --- | --- | |
| Isolation Resistance | 500 Vdc | 1000 | --- | --- | MΩ |
| Isolation Capacitance | 1 KHz / 250 mV rms | --- | 50 | --- | pF |
| Max. Line Regulation (Per 1.0 % change in input change) | | --- | --- | 1.3 | % |

4. Model Selection Guide :

4.1. 1K Vdc Isolation - Single output

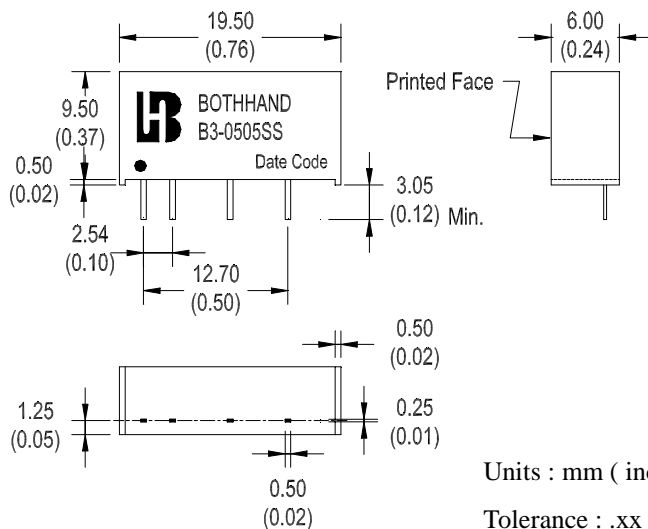
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

| 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. |
|--------------------|---------------------|----------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------|--------------------------|---------------------|
| B3-0505SS | 5 | 5.0 | 400 | 45 | 506 | 70 | ± 8 | 79 |
| B3-0512SS | | 12.0 | 167 | 42 | 500 | 100 | ± 8 | 80 |
| B3-1205SS | 12 | 5.0 | 400 | 26 | 211 | 70 | ± 8 | 79 |
| B3-1212SS | | 12.0 | 167 | 25 | 208 | 100 | ± 8 | 80 |
| B3-1215SS | | 15.0 | 134 | 24 | 206 | 120 | ± 8 | 81 |
| B3-2405SS | 24 | 5.0 | 400 | 8 | 105 | 70 | ± 8 | 79 |
| B3-2412SS | | 12.0 | 167 | 7 | 101 | 100 | ± 8 | 82 |
| B3-xxxxSS | | | | | | | | |

Notes :

- Standard output voltage is 5V, 9V, 12V, 15V, B3-xxxxSS is for Customer Design.
- Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension :



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

| Pin | 1K Vdc - Single |
|-----|-----------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | --- |
| 4 | Vo (-) |
| 5 | --- |
| 6 | Vo (+) |
| 7 | --- |

Note : " --- " means Omitted

4.2. 1K Vdc Isolation - Dual output

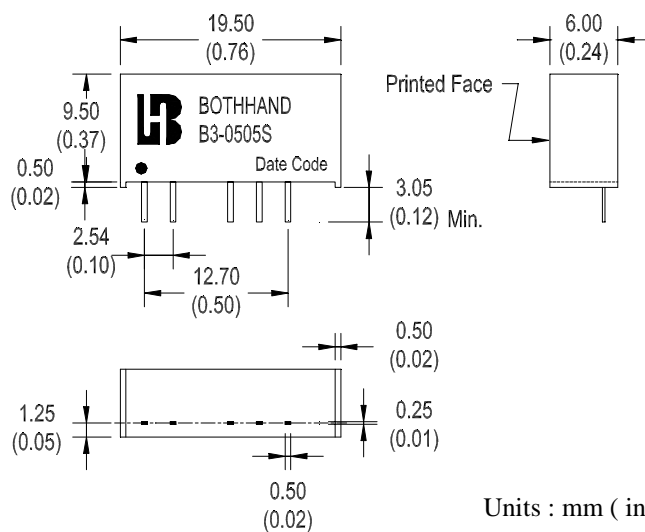
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

| 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. |
|--------------------|---------------------|----------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------|--------------------------|---------------------|
| B3-0505S | 5 | ± 5.0 | ± 200 | 45 | 513 | 70 | ± 8 | 78 |
| B3-0512S | | ± 12.0 | ± 84 | 42 | 500 | 100 | ± 8 | 80 |
| B3-0515S | | ± 15.0 | ± 67 | 35 | 494 | 120 | ± 8 | 81 |
| B3-1205S | 12 | ± 5.0 | ± 200 | 26 | 214 | 70 | ± 8 | 78 |
| B3-1212S | | ± 12.0 | ± 84 | 25 | 208 | 100 | ± 8 | 80 |
| B3-1215S | | ± 15.0 | ± 67 | 24 | 208 | 120 | ± 8 | 80 |
| B3-2405S | 24 | ± 5.0 | ± 200 | 8 | 107 | 70 | ± 8 | 78 |
| B3-247R2S | | ± 7.2 | ± 139 | 8 | 107 | 75 | ± 8 | 78 |
| B3-2412S | | ± 12.0 | ± 84 | 7 | 103 | 100 | ± 8 | 81 |
| B3-2415S | | ± 15.0 | ± 67 | 7 | 102 | 120 | ± 8 | 82 |
| B3-xxxxS | | | | | | | | |

Notes :

- Standard output voltage is ±5V, ±9V, ±12V, ±15V, B3-xxxxS is for Customer Design.
- Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension :



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

| Pin | 1K Vdc - Dual |
|-----|---------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | --- |
| 4 | Vo (-) |
| 5 | Common |
| 6 | Vo (+) |
| 7 | --- |

Note : " --- " means Omitted

4.3. 3K Vdc Isolation - Single output

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

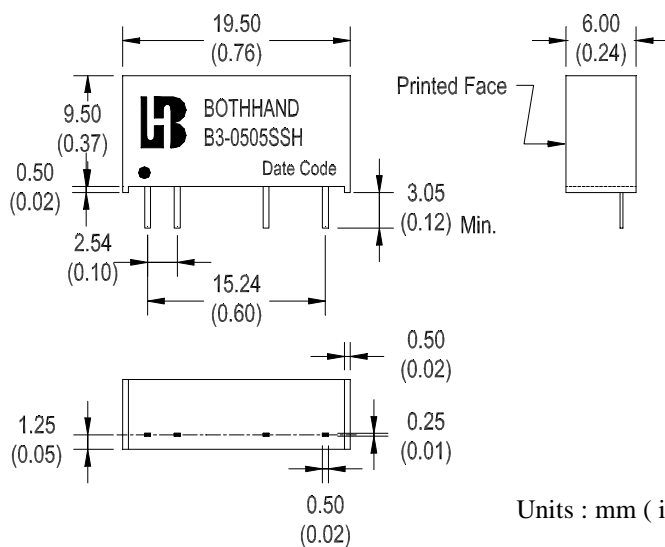
| Bothhand Model No. | Input Voltage (Vdc) | Output Voltage (Vdc) | Output Current (mA) Max. | Input Current @ No Load (mA) Typ. | Input Current @ Max. Load (mA) Typ. | Output Ripple (mV) Max. | Load Regulation (%) Max. | Efficiency (%) Typ. |
|--------------------|---------------------|----------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------|--------------------------|---------------------|
| B3-0505SSH | 5 | 5.0 | 400 | 45 | 506 | 70 | ± 8 | 79 |
| B3-0512SSH | | 12.0 | 167 | 42 | 500 | 100 | ± 8 | 80 |
| B3-0515SSH | | 15.0 | 134 | 35 | 494 | 120 | ± 8 | 81 |
| B3-1205SSH | 12 | 5.0 | 400 | 26 | 211 | 70 | ± 8 | 79 |
| B3-1212SSH | | 12.0 | 167 | 25 | 208 | 100 | ± 8 | 80 |
| B3-2405SSH | 24 | 5.0 | 400 | 8 | 105 | 70 | ± 8 | 79 |
| B3-2412SSH | | 12.0 | 167 | 7 | 102 | 100 | ± 8 | 82 |
| B3-2415SSH | | 15.0 | 133 | 7 | 102 | 120 | ± 8 | 82 |
| B3-xxxxSSH | | | | | | | | |

Notes :

- Standard output voltage is 5V, 9V, 12V, 15V, B3-xxxxSSH is for Customer Design.
- Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension :

(1). Detail Dimension



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

| Pin | 3K Vdc - Single |
|-----|-----------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | --- |
| 4 | --- |
| 5 | Vo (-) |
| 6 | --- |
| 7 | Vo (+) |

Note : " --- " means Omitted

4.4. 3K Vdc Isolation - Dual output

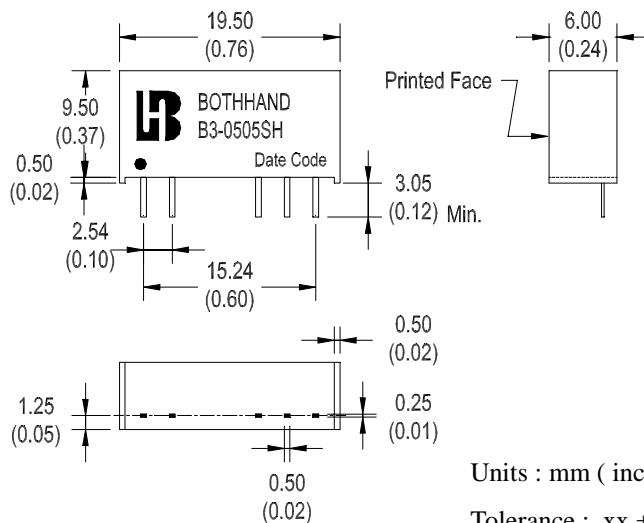
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

| 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. |
|--------------------|---------------------|----------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------|--------------------------|---------------------|
| B3-0505SH | 5 | ± 5.0 | ± 200 | 45 | 513 | 70 | ± 8 | 78 |
| B3-0515SH | | ± 15.0 | ± 67 | 35 | 494 | 120 | ± 8 | 81 |
| B3-1205SH | 12 | ± 5.0 | ± 200 | 26 | 214 | 70 | ± 8 | 78 |
| B3-1212SH | | ±12.0 | ± 84 | 25 | 205 | 100 | ± 8 | 80 |
| B3-2405SH | 24 | ± 5.0 | ± 200 | 8 | 111 | 70 | ± 8 | 78 |
| B3-247R2SH | | ± 7.2 | ± 139 | 8 | 107 | 75 | ± 8 | 78 |
| B3-2412SH | | ± 12.0 | ± 84 | 7 | 103 | 100 | ± 8 | 81 |
| B3-2415SH | | ± 15.0 | ± 67 | 7 | 102 | 120 | ± 8 | 82 |
| B3-xxxxSH | | | | | | | | |

Notes :

- Standard output voltage is ±5V, ±9V, ±12V, ±15V, B3-xxxxSH is for Customer Design.
- Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension :



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

| Pin | 3K Vdc - Dual |
|-----|---------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | --- |
| 4 | --- |
| 5 | Vo (-) |
| 6 | Common |
| 7 | Vo (+) |

Note : " --- " means Omitted