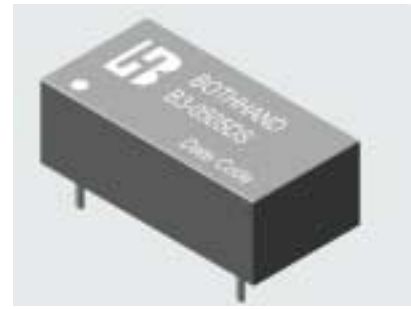


1. Features :

■ 14 Pin DIL 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

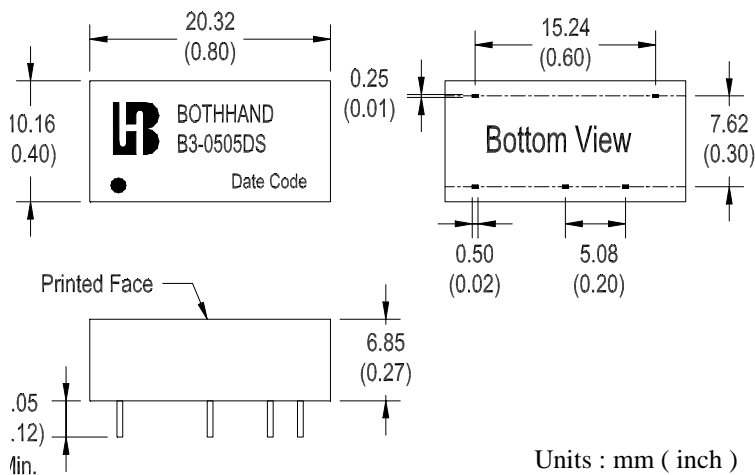
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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

Notes :

- Standard output voltage is 5V, 9V, 12V, 15V, B3-xxxxDS 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		Pin	
1	-Vin	+Vin	14	
2	---	---	13	
3			12	
4			Vo (-)	11
5			---	10
6			Vo (+)	9
7	NC	---	8	

Note : " --- " means Omitted

4.2. 1K Vdc Isolation - Dual output

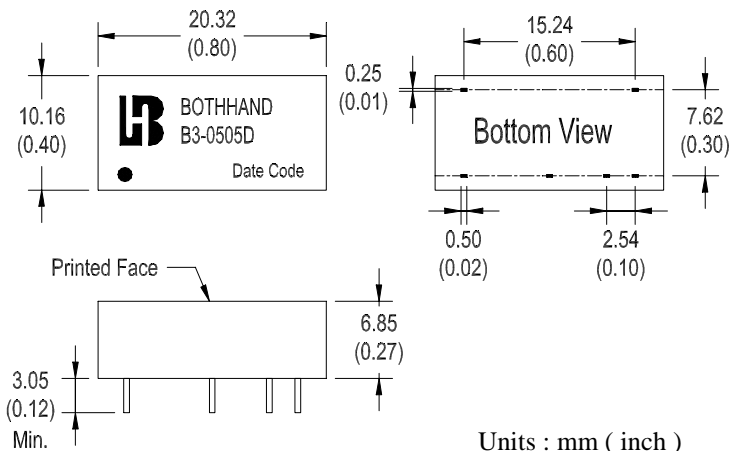
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B3-0505D	5	± 5.0	± 200	45	513	70	± 8	78
B3-0512D		± 12.0	± 84	42	500	100	± 8	80
B3-0515D		± 15.0	± 67	35	494	120	± 8	81
B3-1205D	12	± 5.0	± 200	26	214	70	± 8	78
B3-1212D		± 12.0	± 84	25	208	100	± 8	80
B3-1215D		± 15.0	± 67	24	208	120	± 8	80
B3-2405D	24	± 5.0	± 200	8	107	70	± 8	78
B3-247R2D		± 7.2	± 139	8	107	75	± 8	78
B3-2412D		± 12.0	± 84	7	103	100	± 8	81
B3-2415D		± 15.0	± 67	7	102	120	± 8	82
B3-xxxxD								

Notes :

- Standard output voltage is ±5V, ±9V, ±12V, ±15V, B1-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 - Dual		Pin	
1	-Vin	+Vin	14	
2	---	---	13	
3			12	
4			Vo (-)	11
5			---	10
6			Vo (+)	9
7	NC	Common	8	

Note : " --- " means Omitted

4.3. 3K Vdc Isolation - Single output

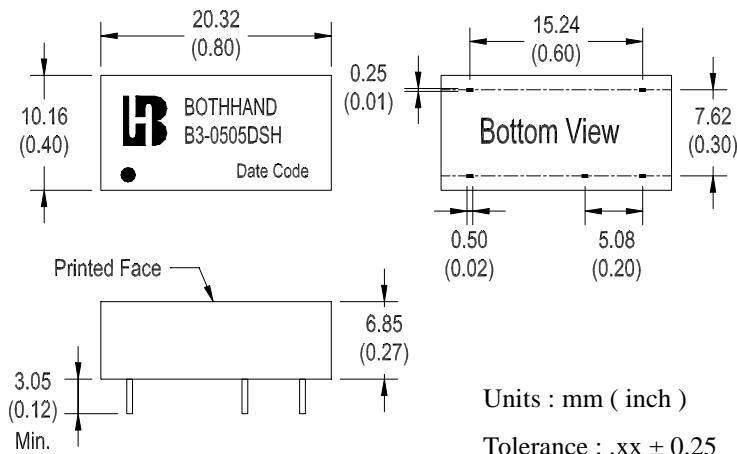
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B3-0505DSH	5	5.0	400	45	506	70	± 8	79
B3-0512DSH		12.0	167	42	500	100	± 8	80
B3-0515DSH		15.0	134	35	494	120	± 8	81
B3-1205DSH	12	5.0	400	26	211	70	± 8	79
B3-1212DSH		12.0	167	25	208	100	± 8	80
B3-2405DSH	24	5.0	400	8	105	70	± 8	79
B3-2412DSH		12.0	167	7	102	100	± 8	82
B3-2415DSH		15.0	133	7	102	120	± 8	82
B3-xxxxDSH								

Notes :

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

Mechanical Dimension :



Pin	3K Vdc - Single		Pin
1	-Vin	+Vin	14
2	---	---	13
3			12
4			11
5			Vo (-)
6	---	---	9
7	NC	Vo (+)	8

Note : " --- " means Omitted

4.4. 3K Vdc Isolation - Dual output

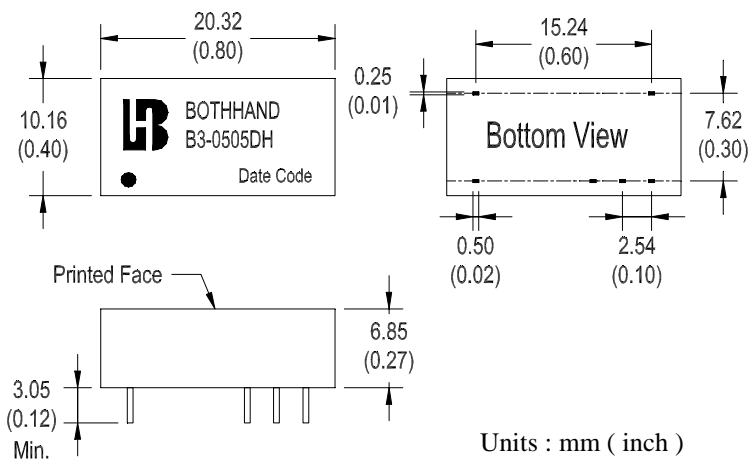
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B3-0505DH	5	± 5.0	± 200	45	513	70	± 8	78
B3-0515DH		± 15.0	± 67	35	494	120	± 8	81
B3-1205DH	12	± 5.0	± 200	26	214	70	± 8	78
B3-1212DH		±12.0	± 84	25	205	100	± 8	80
B3-2405DH	24	± 5.0	± 200	8	111	70	± 8	78
B3-247R2DH		± 7.2	± 139	8	107	75	± 8	78
B3-2412DH		± 12.0	± 84	7	103	100	± 8	81
B3-2415DH		± 15.0	± 67	7	102	120	± 8	82
B3-xxxxDH								

Notes :

- Standard output voltage is ±5V, ±9V, ±12V, ±15V, B3-xxxxDH 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		Pin
1	-Vin	+Vin	14
2	---	---	13
3			12
4			11
5			10
6	Vo (-)	Common	9
7	NC	Vo (+)	8

Note : " --- " means Omitted