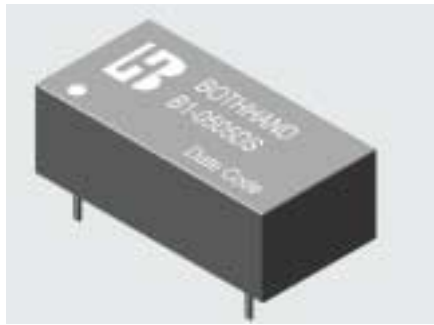


1. Features :

<ul style="list-style-type: none"> ■ 14 Pin DIL Package 	
<ul style="list-style-type: none"> ■ Low Ripple and Noise 	
<ul style="list-style-type: none"> ■ Input / Output Isolation 1K Vdc or 3K Vdc 	
<ul style="list-style-type: none"> ■ 100 % Burn-In 	
<ul style="list-style-type: none"> ■ Input Filter with Internal Capacitor 	
<ul style="list-style-type: none"> ■ 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		---	---	1	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	---	30	---	pF
Max. Line Regulation (Per 1.0 % change in input change)		---	---	1.3	%

4. Model Selection Guide :

4.1. 1K Vdc Isolation - Single output

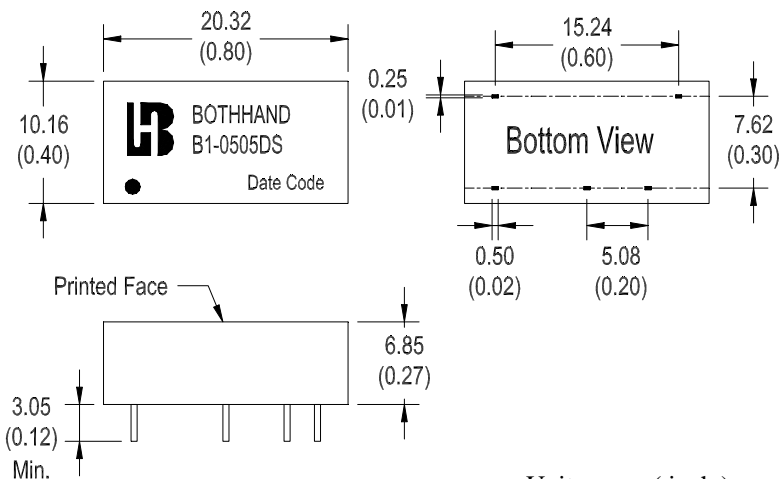
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B1-0505DS	5	5.0	200	30	253	60	± 8	79
B1-0512DS		12.0	84	28	254	100	± 8	79
B1-1205DS	12	5.0	200	18	105	60	± 8	79
B1-1212DS		12.0	84	18	104	100	± 8	80
B1-243R3DS	24	3.3	303	5	56	50	± 8	74
B1-2405DS		5.0	200	4	54	60	± 8	77
B1-2412DS		12.0	84	4	55	100	± 8	76
B1-xxxxDS								

Notes :

- Standard output Voltage is 3.3V, 5V, 12V, 15V, B1-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

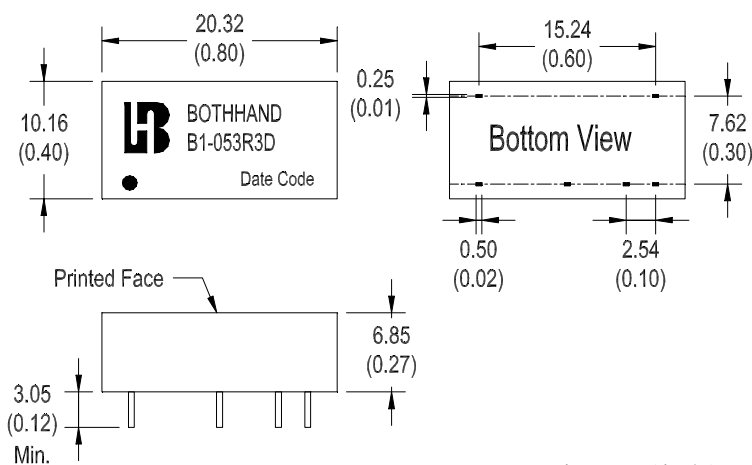
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B1-053R3D	5	± 3.3	± 150	30	274	60	± 12	73
B1-0505D		± 5.0	± 100	30	263	70	± 10	76
B1-0512D		± 12.0	± 42	28	253	100	± 8	79
B1-0515D		± 15.0	± 34	28	250	120	± 8	80
B1-1205D	12	± 5.0	± 100	18	104	70	± 8	80
B1-1212D		± 12.0	± 42	18	104	100	± 8	80
B1-243R3D	24	± 3.3	± 150	5	56	60	± 8	74
B1-2405D		± 5.0	± 100	4	55	70	± 8	76
B1-2412D		± 12.0	± 42	4	55	100	± 8	76
B1-xxxxD								

Notes :

- Standard output Voltage is ±3.3V, ±5V, ±12V, ±15V, B1-xxxxD 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	---	Vo (-)	13
3			12
4			11
5			10
6			9
7	NC	Common	8

Note : " --- " means Omitted

4.3. 1K Vdc Isolation - Dual separate output

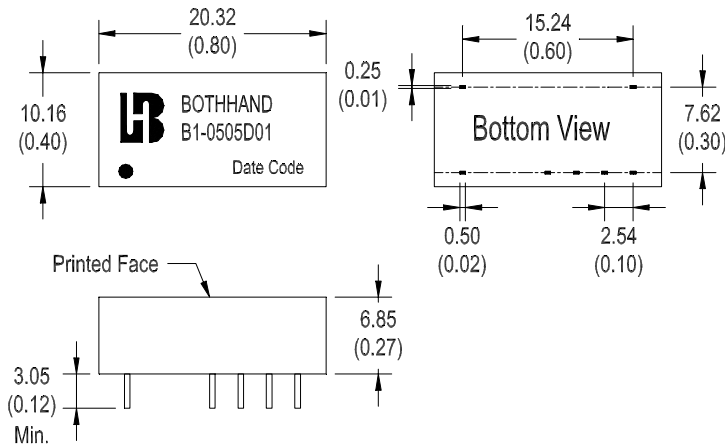
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
		5.0	15.0	100	33					
B1-0505D01	5	5.0	5.0	100	100	30	263	70	± 10	76
B1-0515D01		5.0	15.0	100	33	28	250	75	± 8	80
B1-1205D01	12	5.0	5.0	100	100	18	107	70	± 8	78
B1-1212D01		5.0	12.0	100	42	18	104	75	± 8	80
B1-1215D01		5.0	15.0	100	33	13	106	75	± 8	78
B1-2405D01	24	5.0	5.0	100	100	5	54	70	± 8	76
B1-xxxxDxx										

Notes :

1. B1-xxxxDxx is for Customer Design.
2. Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension :



Pin	1K Vdc - Dual Separate		Pin
1	-Vin	+Vin	14
2			13
3		---	12
4	---	Vo1 (+)	11
5		Vo1 (-)	10
6		Vo2 (+)	9
7	NC	Vo2 (-)	8

Units : mm (inch)

Tolerance : .xx ± 0.25

(± 0.01)

Note : " --- " means Omitted

4.4. 3K Vdc Isolation - Single output

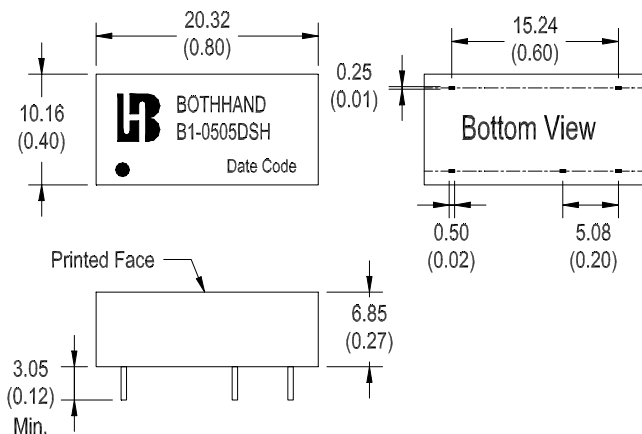
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B1-0505DSH	5	5.0	200	30	253	60	± 8	79
B1-0512DSH		12.0	84	28	254	100	± 8	79
B1-0515DSH		15.0	67	28	250	120	± 8	80
B1-1205DSH	12	5.0	200	18	105	60	± 8	79
B1-1212DSH		12.0	84	18	104	100	± 8	80
B1-2405DSH	24	5.0	200	5	54	60	± 8	77
B1-2412DSH		12.0	84	4	55	100	± 8	76
B1-2415DSH		15.0	67	4	55	120	± 8	76
B1-xxxxDSH								

Notes :

- Standard output Voltage is 5V, 12V, 15V, B1-xxxxDSH 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 - Single		Pin
1	-Vin	+Vin	14
2	---	---	13
3			12
4			11
5			Vo (-)
6	---	---	9
7	NC	Vo (+)	8

Note : " --- " means Omitted

4.5. 3K Vdc Isolation - Dual output

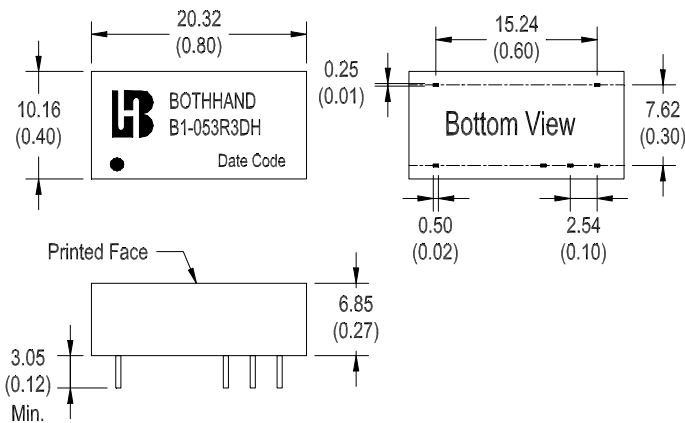
(Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted)

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.
B1-053R3DH	5	± 3.3	± 150	30	274	60	± 12	73
B1-0505DH		± 5.0	± 100	30	263	70	± 10	76
B1-1205DH	12	± 5.0	± 100	18	104	70	± 8	80
B1-1212DH		± 12.0	± 42	18	104	100	± 8	80
B1-2405DH	24	± 5.0	± 100	5	55	70	± 8	76
B1-2412DH		± 12.0	± 42	4	55	100	± 8	76
B1-xxxxDH								

Notes :

- Standard output Voltage is ±3.3V, ±5V, ±12V, ±15V, B1-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			Vo (-)
6	Common	9	
7	NC	Vo (+)	8

Note : " --- " means Omitted