

# B3 LF Series

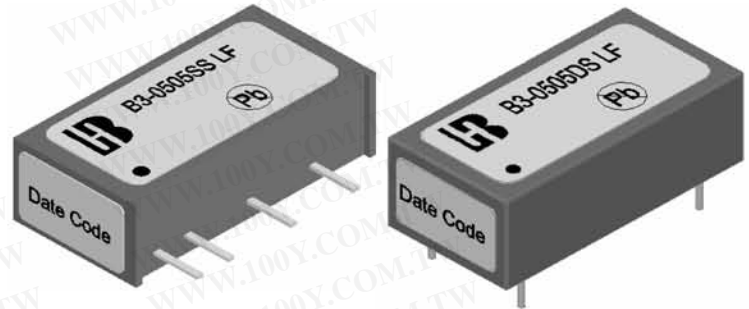
## 2 Watt Isolated DC-DC Converter

Single / Dual Output

### 1. Features

- 7 Pin SIL/ 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
- Net Weight : 2.2 g / 2.7 g Typical
- RoHS Converter Certified By SGS

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)



### 2. Single Output Selection Guide

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

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>1) Single Output SIL Package Style</b>								
B3-0505SS LF	5	5	400	45	506	60	± 8	79
B3-0512SS LF		12	167	42	500	100	± 8	80
B3-0515SS LF		15	134	35	494	120	± 8	81
B3-1205SS LF	12	5	400	26	211	60	± 8	79
B3-1212SS LF		12	167	25	208	100	± 8	80
B3-1215SS LF		15	134	24	206	120	± 8	81
B3-2405SS LF	24	5	400	8	105	60	± 8	79
B3-2412SS LF		12	167	7	101	100	± 8	82
B3-2415SS LF		15	134	7	102	120	± 8	82
<b>2) Single Output DIL Package Style</b>								
B3-0505DS LF	5	5	400	45	506	60	± 8	79
B3-0512DS LF		12	167	42	500	100	± 8	80
B3-0515DS LF		15	134	35	494	120	± 8	81
B3-1205DS LF	12	5	400	26	211	60	± 8	79
B3-1212DS LF		12	167	25	208	100	± 8	80
B3-1215DS LF		15	134	24	206	120	± 8	81
B3-2405DS LF	24	5	400	8	105	60	± 8	79
B3-2412DS LF		12	167	7	101	100	± 8	82
B3-2415DS LF		15	134	7	102	120	± 8	82



Bothhand Enterprise Inc.

# B3 LF Series

## 2 Watt Isolated DC-DC Converter

Single / Dual Output

3) Dual Output SIL Package Style								
B3-0505S LF	5	± 5	± 200	45	513	60	± 8	78
B3-0512S LF		± 12	± 84	42	500	100	± 8	80
B3-0515S LF		± 15	± 67	35	494	120	± 8	81
B3-1205S LF	12	± 5	± 200	26	214	60	± 8	78
B3-1212S LF		± 12	± 84	25	208	100	± 8	80
B3-1215S LF		± 15	± 67	24	208	120	± 8	80
B3-2405S LF	24	± 5	± 200	8	107	60	± 8	78
B3-247R2S LF		± 7.2	± 139	8	107	75	± 8	78
B3-2412S LF		± 12	± 84	7	103	100	± 8	81
B3-2415S LF		± 15	± 67	7	102	120	± 8	82

4) Dual Output DIL Package Style								
B3-0505D LF	5	± 5	± 200	45	513	60	± 8	78
B3-0512D LF		± 12	± 84	42	500	100	± 8	80
B3-0515D LF		± 15	± 67	35	494	120	± 8	81
B3-1205D LF	12	± 5	± 200	26	214	60	± 8	78
B3-1212D LF		± 12	± 84	25	208	100	± 8	80
B3-1215D LF		± 15	± 67	24	208	120	± 8	80
B3-2405D LF	24	± 5	± 200	8	107	60	± 8	78
B3-247R2D LF		± 7.2	± 139	8	107	75	± 8	78
B3-2412D LF		± 12	± 84	7	103	100	± 8	81
B3-2415D LF		± 15	± 67	7	102	120	± 8	82

Notes:

1. Load regulation is for output current change from 20% to 100% Max. Load.

### 3 . 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
Operation Temperature(Ambient Temperature)	Output Full Load	-40	---	+85	°C
Storage Temperature		-55	---	+105	



Bothhand Enterprise Inc.

# B3 LF Series

## 2 Watt Isolated DC-DC Converter

Single / Dual Output

### 4 . 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	500Vdc	1000	---	---	MΩ
Isolation Capacitance	1KHz / 250mV rms	---	50	---	pF
Max. Line Regulation (Per1.0% change in input change)		---	---	1.3	%

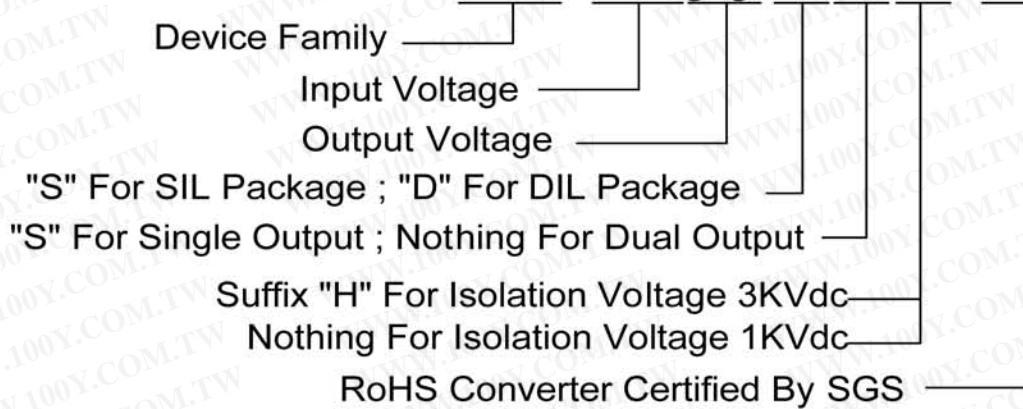
### 5 . General Specification

Parameter	Specification	Condition
Isolation Voltage	1000 / 3000 Vdc	Test Duration 60 Seconds / 0.5 mA
Isolation Resistance	1000 MΩ Min.	@ 500 Vdc
Operating Temperature (1)	-40°C ~ +85°C	@ Ambient Temperature With Natural Convection
Operating Temperature (2)	-40°C ~ +95°C	@ Case Surface Temperature
Storage Temperature	-55°C ~ +105°C	---
Humidity	Up To 90 %	---
Cooling	Free Air Convection	---
Case Type	Plastic	---



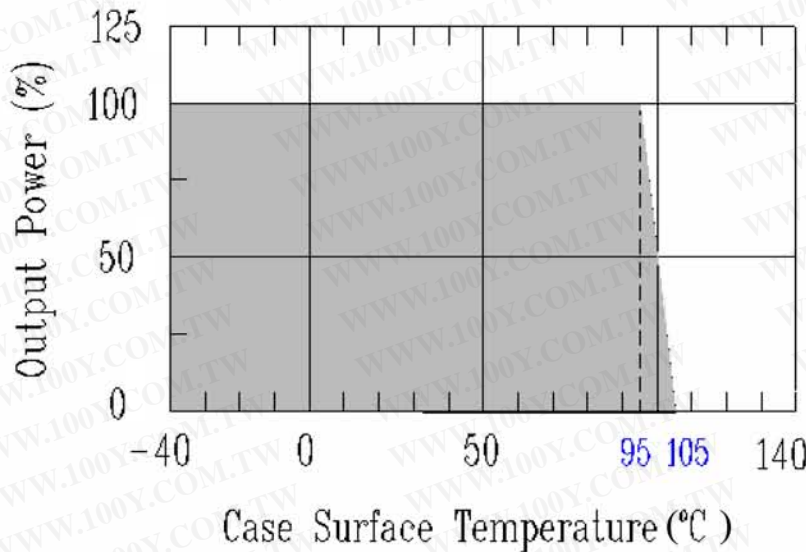
### 6 . Ordering Information

# B3-xyyySSH LF



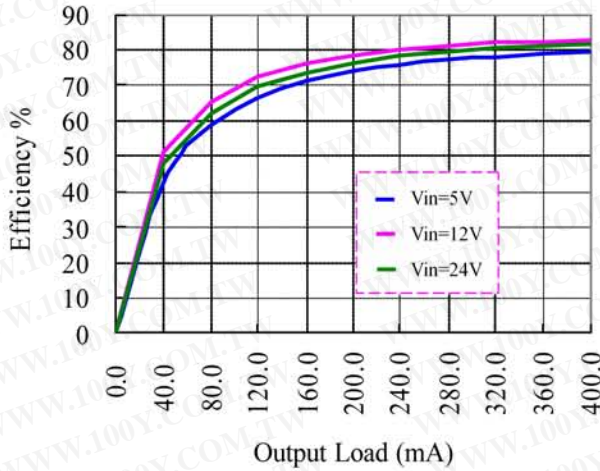
### 7 . Power Derating Curve

Temperature derating graph

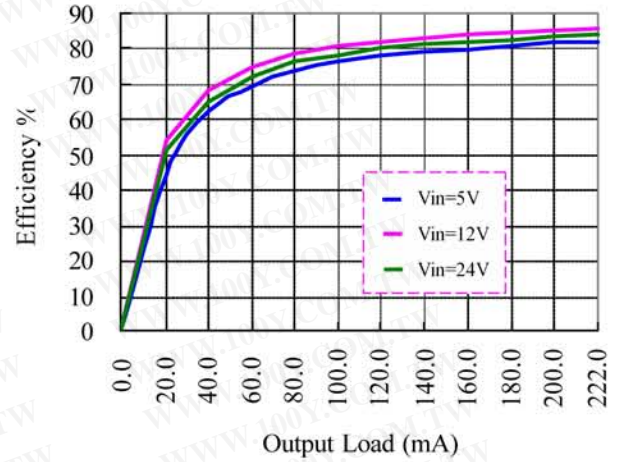


### 8 . Efficiency & Output Load Chart

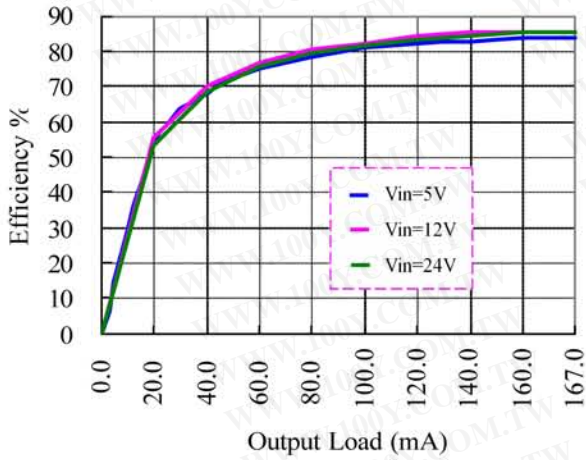
#### Vout = 5 Vdc



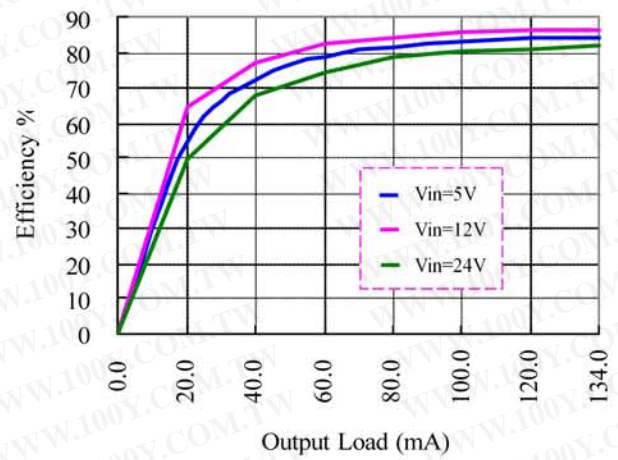
#### Vout = 9 Vdc



#### Vout = 12 Vdc



#### Vout = 15 Vdc



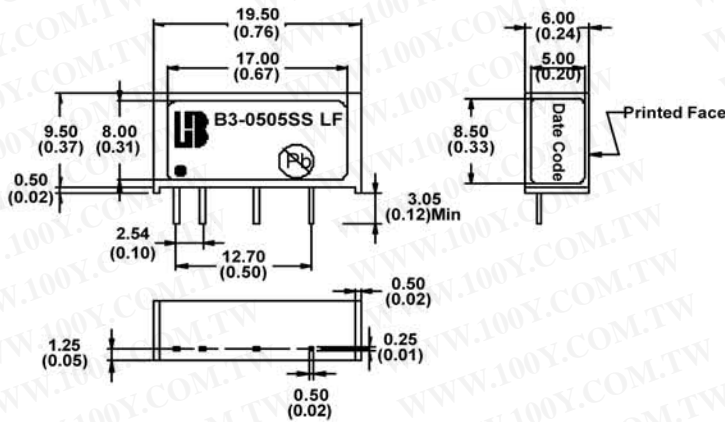
# B3 LF Series

## 2 Watt Isolated DC-DC Converter

Single / Dual Output

### 9 . Mechanical Dimension

#### SIL Package Style

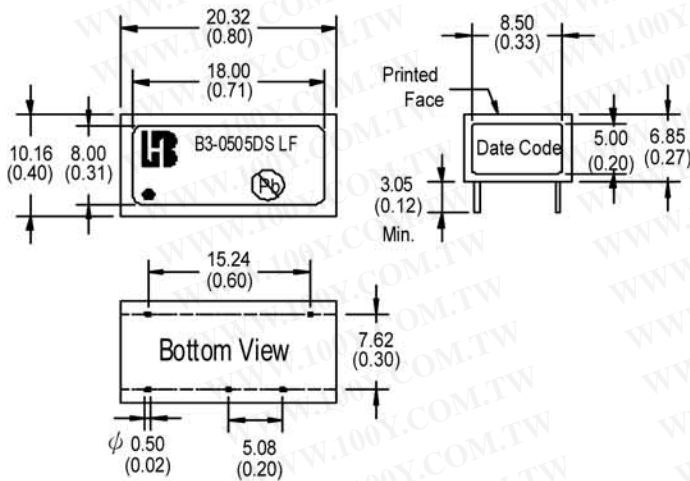


Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

Pin	Single Output		Pin	Dual Output	
	1K Vdc	3K Vdc		1K Vdc	3K Vdc
1	+Vin	+Vin	1	+Vin	+Vin
2	-Vin	-Vin	2	-Vin	-Vin
3	No Pin	No Pin	3	No Pin	No Pin
4	-Vo	No Pin	4	-Vo	No Pin
5	No Pin	-Vo	5	Common	-Vo
6	+Vo	No Pin	6	+Vo	Common
7	No Pin	+Vo	7	No Pin	+Vo

#### DIL Package Style



Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

Pin	1KVdc-Single		Pin	3KVdc-Single		Pin
1	-Vin	+Vin	14	-Vin	+Vin	14
2		No Pin	13		No Pin	13
3		No Pin	12		No Pin	12
4	No Pin	-Vo	11	No Pin	-Vo	11
5		No Pin	10		-Vo	10
6		+Vo	9		No Pin	9
7	NC	No Pin	8	NC	+Vo	8

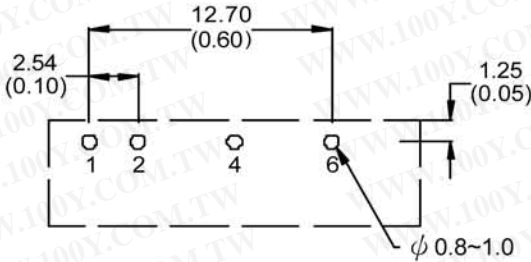
Pin	1K Vdc-Dual		Pin	3K Vdc-Dual		Pin
1	-Vin	+Vin	14	-Vin	+Vin	14
2		No Pin	13		No Pin	13
3		No Pin	12		No Pin	12
4	No Pin	-Vo	11	No Pin	-Vo	11
5		No Pin	10		-Vo	10
6		+Vo	9		Common	9
7	NC	Common	8	NC	+Vo	8



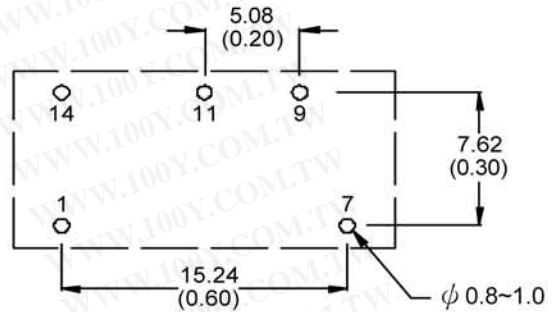
Bothhand Enterprise Inc.

### 10 Recommended Footprint Details

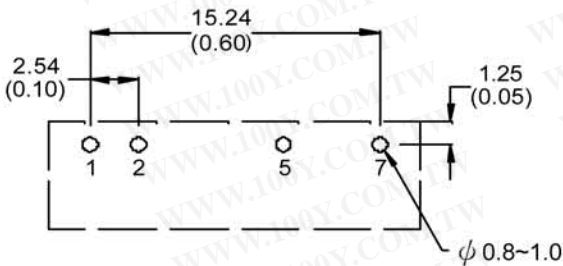
#### SIL Single Output Package Style(1K Vdc)



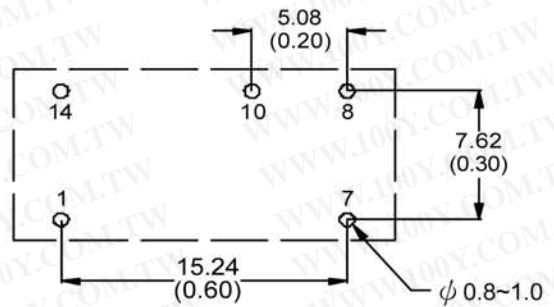
#### DIL Single Output Package Style (1K Vdc)



#### SIL Single Output Package Style(3K Vdc)



#### DIL Single Output Package Style (3K Vdc)



Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)