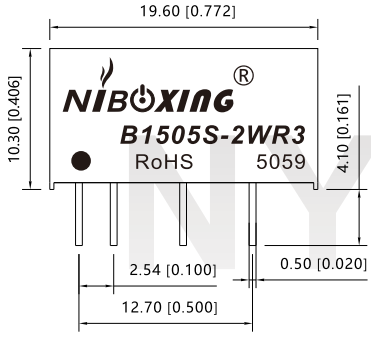
2W, Fixed input voltage, isolated & unregulated single output

FEATURES

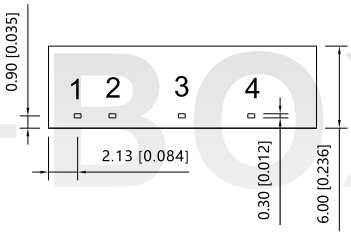
- ★ Compact size, high power density
- ★ Operating temperature range: -40℃ to +85℃
- ★ No-load input current as low as 5mA
- ★ I/O isolation test voltage 1K VDC
- ★ Low ripple & noise
- ★ RoHS Compliant
- ★ Industrial grade, high reliability

BxxxxS-2W series are specially designed for applications where an isolated voltage is required in a distributed power supply system. They are suitable for: pure digital circuits, low frequency analog circuits, relay-driven circuits and data switching circuits.

Dimensions



Front View



Bottom View

PIN	Function
1	+Vi
2	-Vi
3	-Vo
4	+Vo

Note:
Unit:mm[inch]
Pin size: 0.3x0.5[0.012x0.020]
Pin diameter tolerances:±0.10[±0.004]
General tolerances:±0.50[±0.020]

Selection Guide

Part No.	Input Voltage (VDC)	Nominal Output Voltage and Current	Efficiency(%)(Typ.) @ Full Load	Output Current (mA)(Min.)	Max. Capacitive Load(μF)
B0303S-2W	2.97~3.63V (Typ: 3.3VDC)	3.3V/600mA	45mA	82%	10μF
B0305S-2W		5V/400mA	40mA	80%	10μF
B0312S-2W		12V/166mA	20mA	80%	4.7μF
B0315S-2W		15V/133mA	15mA	80%	2.2μF
B0324S-2W		24V/83mA	10mA	80%	2.2μF
B0503S-2W	4.5~5.5V (Typ: 5VDC)	3.3V/600mA	45mA	83%	10μF
B0505S-2W		5V/400mA	40mA	82%	10μF
B0512S-2W		12V/166mA	20mA	81%	4.7μF
B0515S-2W		15V/133mA	15mA	80%	2.2μF
B0524S-2W		24V/83mA	10mA	80%	2.2μF

B1203S-2W	10.8~13.2V (Typ：12VDC)	3.3V/600mA	45mA	83%	10μF
B1205S-2W		5V/400mA	40mA	83%	10μF
B1212S-2W		12V/166mA	20mA	81%	4.7μF
B1215S-2W		15V/133mA	15mA	82%	2.2μF
B1224S-2W		24V/83mA	10mA	82%	2.2μF
B1503S-2W	13.5~16.5V (Typ：15VDC)	3.3V/600mA	45mA	83%	10μF
B1505S-2W		5V/400mA	40mA	83%	10μF
B1512S-2W		12V/166mA	20mA	81%	4.7μF
B1515S-2W		15V/133mA	15mA	82%	2.2μF
B1524S-2W		24V/83mA	10mA	82%	2.2μF
B2403S-2W	21.6~26.4V (Typ：24VDC)	3.3V/600mA	45mA	83%	10μF
B2405S-2W		5V/400mA	40mA	83%	10μF
B2412S-2W		12V/166mA	20mA	81%	4.7μF
B2415S-2W		15V/133mA	15mA	82%	2.2μF
B2424S-2W		24V/83mA	10mA	82%	2.2μF

Output Specifications

Item	Operating Conditions		Min	Typ	Max
Output Power			0.1W	--	2W
Output Voltage Accuracy	100% load		-7.5%	--	+2.5%
Line Regulation	Input voltage change: ±1%		--	±1.5%	--
Load Regulation	10%~100% Load		--	15%	20%
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	3.3~12V Output	--	75mV	100mV
		15~24V Output	--	100mV	200mV
Temperature Drift Coefficient	100% load		--	--	±0.03%/℃

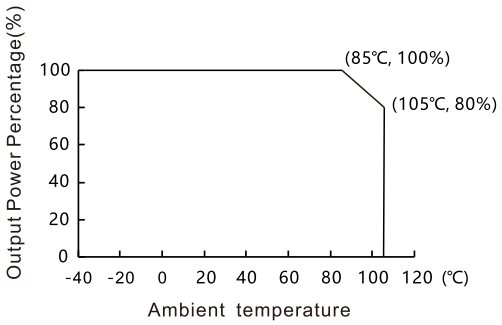
Note: *Ripple and noise tested with "parallel cable" method, please see DC-DC Converter Application Notes for specific operation methods.

General Specifications

Item	Operating Conditions	Min	Typ	Max
Insulation Voltage	Input-Output, Test for 1min	1000VDC	--	--
Operating Temperature		-40℃	--	+85℃
Storage Temperature		-55℃	--	+125℃
Storage Humidity		--	--	95%RH
Working Frequency		--	100KHz	--
MTBF	MIL-HDBK-217F, 25°C		3500,000h	
CasingMaterial	Blackflame-retardantandheat-resistant plastic (UL94-V0)			

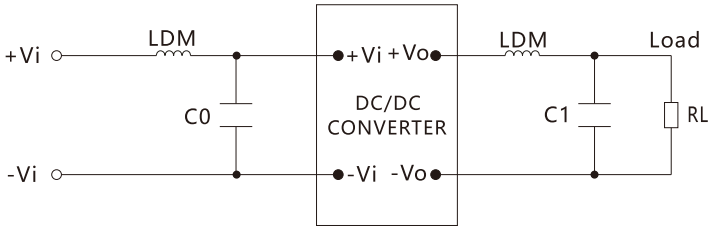
Product Characteristic Curve

Temperature Derating Curve



Design Reference

1 Typical application



Note

We recommend using an electrolytic capacitor or MLCC for C0,C1.Choose a Capacitor voltage rating with at least 20% margin, in other words not exceeding 80%.

Input Voltage	3.3V	5V	12V	15V	24V
C0	4.7μF	4.7μF	2.2μF	2.2μF	1μF

Output Voltage	3.3V	5V	12V	15V	24V
C1	10μF	10μF	4.7μF	2.2μF	1μF

LDM	6.8μH

Safety precautions

1.If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;

2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;

3. All index testing methods in this datasheet are based on our Company's corporate standards;

4. We can provide product customization service, please contact our technicians directly for specific information;

5. For more product information, please visit our official website（www.gzny-boxing.com） or email us (sales@gzny-boxing.com).