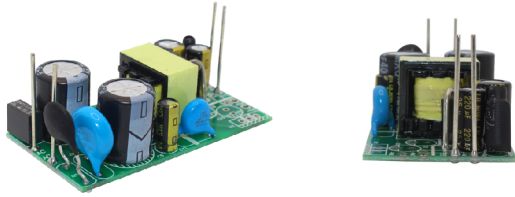
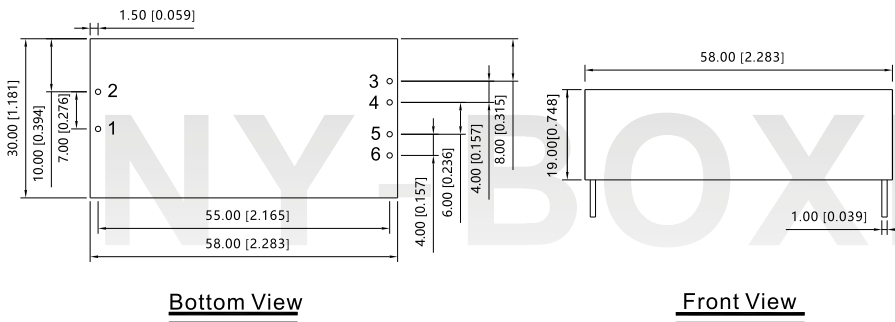


15W AC/DC SMPS
DESCRIPTION


- ★ Wide input AC85~465V & DC100~650V
- ★ Output short circuit, over-current protection
- ★ Compact size, high power density
- ★ I/O isolation test voltage 3k VAC
- ★ Low ripple & noise
- ★ RoHS Compliant
- ★ Industrial grade, high reliability

HV15-A, Bxx series is one of Nyboxing's highly efficient green power AC-DC Converter series. They feature ultra-wide wide input range accepting either AC or DC voltage, high efficiency, low power consumption and Class II reinforced insulation.

Dimensions


PIN	Function	
	HV15-A	HV15-B
1	AC	AC
2	AC	AC
3	+Vo1	+Vo1
4	-Vo1	-Vo1
5	NP	+Vo2
6	NP	-Vo2

Note:
 Unit: mm[inch]
 General tolerances: $\pm 0.20[\pm 0.008]$
 dimensional tolerance: $\pm 0.50[\pm 0.020]$
 NP: no pin definition

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current		Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.	Dimensions (LxWxH)
		Vo1/Io1	Vo2/Io2			
HV15-A03	9.9W	3.3V/3000mA	--	77%	3000 μF	58.0x30.0x19.0mm
HV15-A05		5V/3000mA	--	78%	3000 μF	
HV15-A09		9V/1670mA	--	78%	2000 μF	
HV15-A12	15W	12V/1250mA	--	80%	2000 μF	
HV15-A15		15V/1000mA	--	81%	1000 μF	
HV15-A24		24V/625mA	--	84%	820 μF	
HV15-B0512	15W	5V/2000mA	12V/420mA	75%	2000 μF	58.0x30.0x19.0mm
HV15-B0524		5V/2000mA	24V/210mA	76%	2000 μF	
HV15-B1205		12V/1000mA	5V/600mA	79%	1500 μF	
HV15-B1212		12V/625mA	12V/625mA	80%	820 μF	
HV15-B1224		12V/830mA	24V/210mA	82%	1000 μF	
HV15-B2405		24V/500mA	5V/600mA	79%	820 μF	

Input Specifications

Item	Operating Conditions	Min	Typ	Max
Input Voltage Range	AC input	85VAC	--	465VAC
	DC input	100VDC	--	650VDC
Input Frequency		47Hz	--	63Hz
Stand-by Power Consumption		--	0.2W	--
Input Current	230VAC	--	320mA	--
	380VAC	--	160mA	--

Output Specifications

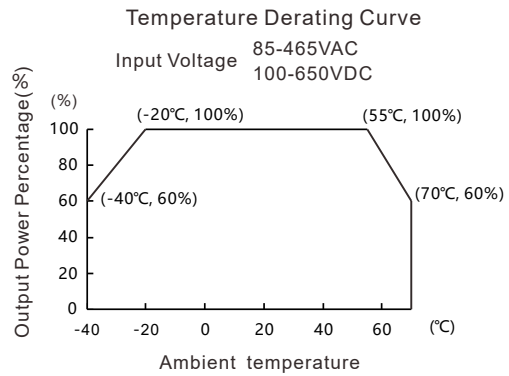
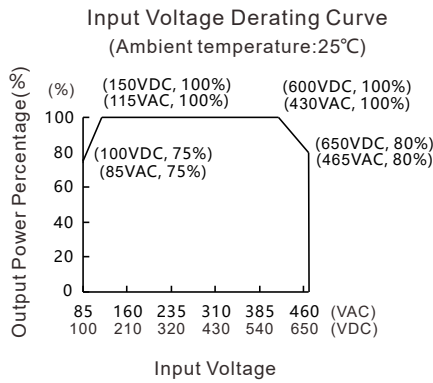
Item	Operating Conditions	Min	Typ	Max
Output Voltage Accuracy		--	±1%	--
Line Regulation	Full load	--	±1.5%	--
Load Regulation	10%~100% Load	--	±3%	--
Ripple & Noise*	20MHz bandwidth	5V Output	--	150mV
	(peak-to-peak value)	Other Output	--	100mV
Short Circuit Protection	Hiccup, continuous, self-recovery			
Over-current Protection	≥110%Io			
Minimum Load	0			
Start delay time	--			
Hold-up Time	500ms			
	10ms			

Note: * The "parallel cable" method is used for Ripple and noise test, please refer to AC-DC Converter Application Notes for specific information.

General Specifications

Item	Operating Conditions	Min	Typ	Max
Isolation	Input-Output, Test for 1min	--	3000VAC	--
Operating Temperature		-40°C	--	+70°C
Storage Temperature		-40°C		+105°C
Storage Humidity		--	--	95%RH
Working frequency		--	65KHz	--
MTBF	MIL-HDBK-217F, 25°C		215,000h	

Product Characteristic Curve



Design Reference

1 Typical application

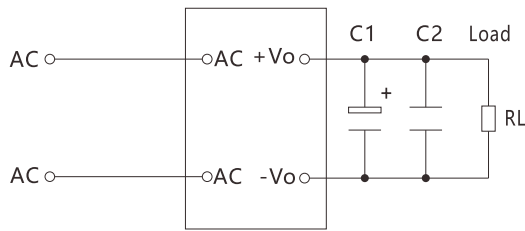


Fig. 1: HV15-Axx Typical circuit diagram

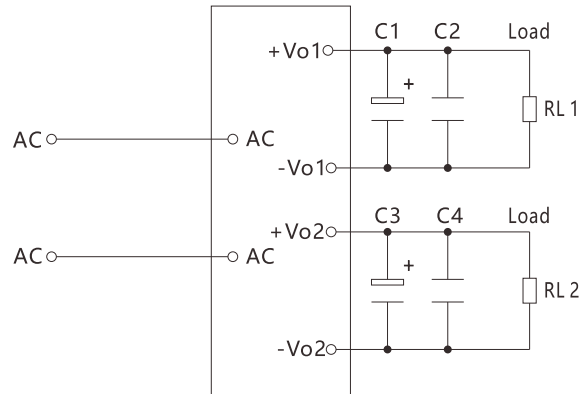


Fig. 2: HV15-Bxx Typical circuit diagram

2 EMC compliance recommended circuit

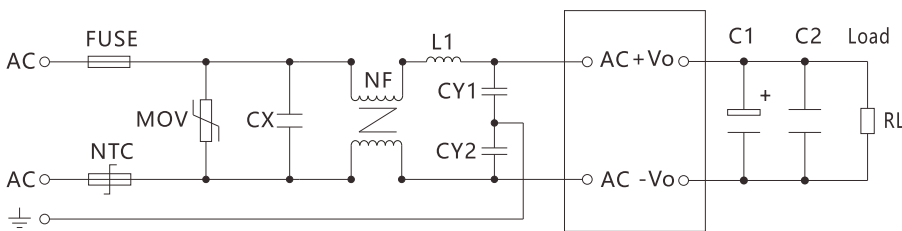


Fig 3: HV15-Axx EMC application circuit higher requirement

Design Reference

2 EMC compliance recommended circuit

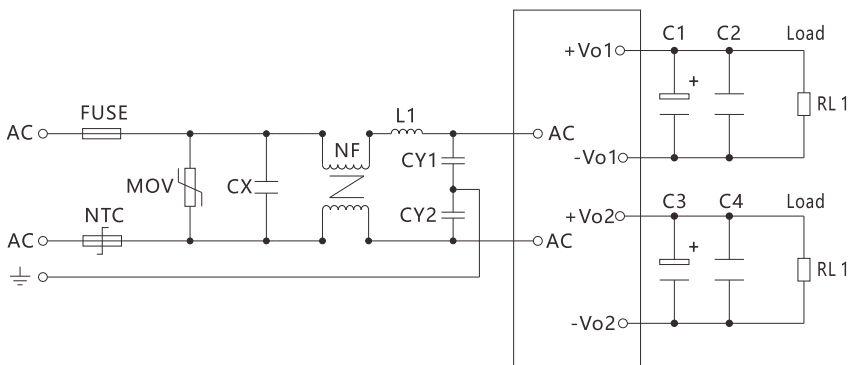


Fig 4:HV15-Bxx EMC application circuit higher requirement

Note

We recommend using an electrolytic capacitor with high frequency, and low ESR rating for C1 (refer to manufacturer's datasheet). Choose a Capacitor voltage rating with at least 20% margin, in other words not exceeding 80%. C2 is a ceramic capacitor used for filtering high-frequency noise.

3 Input part: parameter recommendation

Component	Recommended value
FUSE	1A/250VAC,Slow fusing (required)
R1	5D-9
MOV	821KD10
CX	0.1 μ F/550VAC
L1	470 μ H
NF	10mH-30mH
CY1,CY2	1000pF/250V

4 Output part: parameter recommendation

Output Voltage	3.3V	5V	9V	12V	15V	24V
C1,C3	680 μ F/10V		330 μ F/25V			220 μ F/35V
C2,C4	1 μ F/50V					

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°C, 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).