

100HBAW Series

100W Half-Brick - Single/Dual Output DC-DC Converter - Wide Input - Isolated & Regulated

DC-DC Converter

100 Watt

- ⊕ Wide Input voltage range (2:1/4:1)
- ⊕ Typical Efficiency: 85%
- ⊕ Input under voltage, over voltage protection
- ⊕ Short circuit protection (SCP), auto recovery
- ⊕ Input-output isolated
- ⊕ PCB Board in-line type installs
- ⊕ High power density
- ⊕ Optional heat sink

The 100HBAW series offers 100W of output, wide input voltage of 2:1 (9-18VDC; 18-36VDC; 36-72VDC) & 4:1 (9-36VDC; 18-72VDC), and features 1500VDC isolation, input under voltage protection, over current and short circuit protection.

All models are particularly suited to tele-communications, industrial, test equipments power etc.



Common specifications

Short circuit protection*:	Continuous, automatic recovery
Operation temperature range:	-25°C~+85°C
Storage temperature range:	-55°C ~+125°C
Storage humidity range:	< 90%
Case material:	Plastic [UL94-V0] / aluminium
MTBF:	2,000,000 hours

*Supply voltage must be discontinued at the end of short circuit duration.

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute and 1mA max	1500			VDC

Note:

1. Operation under minimum load will not damage the converter; However, they may not meet all specification listed, and that will reduce the life of product.
2. All specifications measured at Ta = 25°C, humidity <75%, nominal input voltage and rated output load unless otherwise specified.
3. In this datasheet, all the test methods of indications are based on corporate standards.

Output specifications

Item	Test condition	Min	Typ	Max	Units
Output power				100	W
Line regulation			±0.2		%
Load regulation			±0.5		%
Output voltage accuracy			±1.0		%
Temperature coefficient				±0.02	%/°C
Ripple & Noise*	20MHz Bandwidth		150		mVp-p
Switching frequency			300		KHz

*Test ripple and noise by "parallel cable" method.

Example:

100HBAW_2405S1.5

W = 100 Watt; HB = Half-Brick; A = Pinning; W = Wide input (2:1);
 24 = 18-36 Vin; 05 = 5Vout; S = Single Output; 1.5 = 1.5kVDC Isolation

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Part Number	Input Voltage [V]	Output Voltage [VDC]	Output Current [A, max]
100HBAW_xx03S1.5	9-18; 18-36; 36-72	3.3	20
100HBAW_xx05S1.5	9-18; 18-36; 36-72	5	20
100HBAW_xx12S1.5	9-18; 18-36; 36-72	12	8.3
100HBAW_xx15S1.5	9-18; 18-36; 36-72	15	6.7
100HBAW_xx24S1.5	9-18; 18-36; 36-72	24	4.2
100HBAW_xx48S1.5	9-18; 18-36; 36-72	48	2.1
100HBAW4_xx03S1.5	9-36; 18-72	3.3	20
100HBAW4_xx05S1.5	9-36; 18-72	5	20
100HBAW4_xx12S1.5	9-36; 18-72	12	8.3
100HBAW4_xx15S1.5	9-36; 18-72	15	6.7
100HBAW4_xx24S1.5	9-36; 18-72	24	4.2
100HBAW4_xx48S1.5	9-36; 18-72	48	2.1

• xx= Input Voltage

100HBAW

Vin= 9-18V, xx= 12

Vin= 18-36V, xx= 24

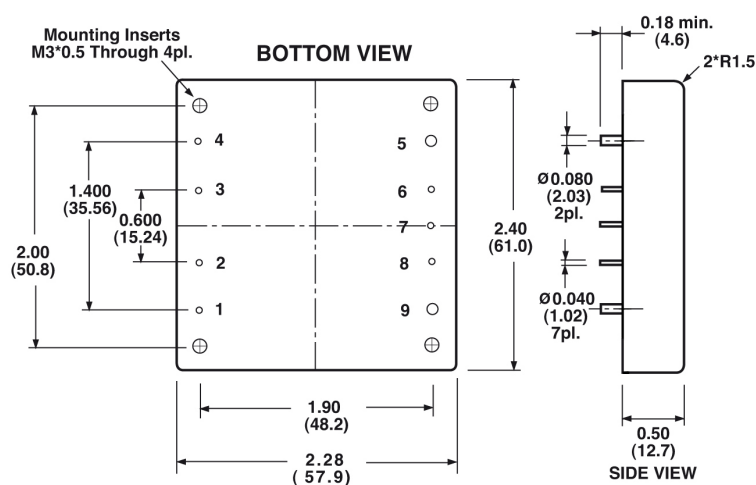
Vin= 36-72V, xx= 48

100HBAW4

Vin= 9-36V, xx= 24

Vin= 18-72V, xx= 48

Mechanical dimensions



Pin assignment

Pin	S
1	+Vin
2	REM
3	CASE
4	-Vin
5	GND
6	-S
7	TRIM
8	+S
9	+Vout

Note:

Unit: mm[inch]

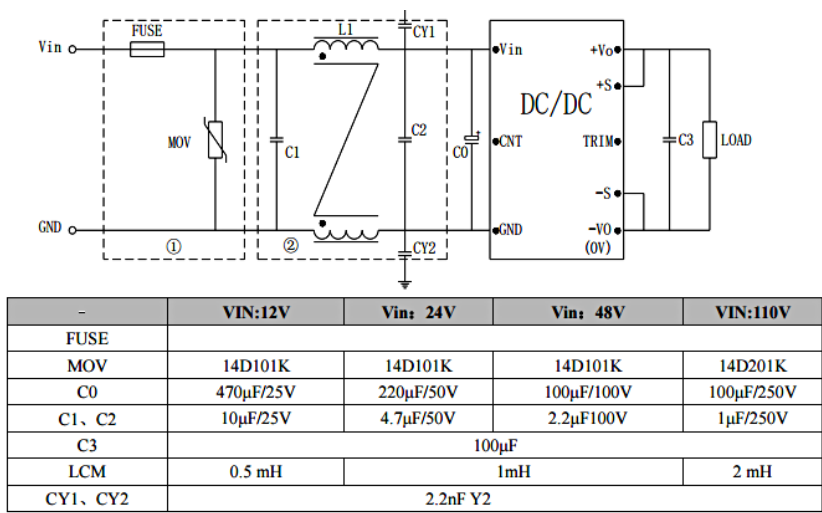
Pin section tolerances: $\pm 0.10\text{mm}$ [$\pm 0.004\text{inch}$]

General tolerances: $\pm 0.25\text{mm}$ [$\pm 0.010\text{inch}$]

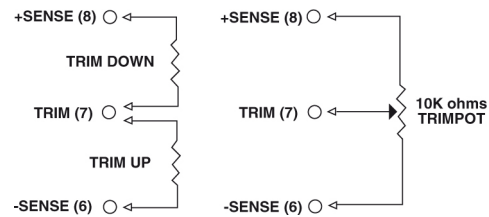
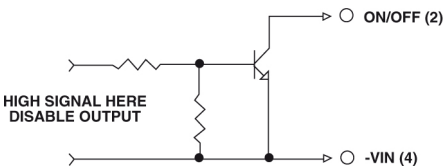
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EMC solution recommended circuit



Remote on/off control External output trim



Control (Positive Logic)	• ON	• CNT Pin left open or connect to +Vin
Control (Positive Logic)	• OFF	• CNT Pin connect -Vin
Control (Negative Logic,Tip/P)	• ON	• CNT Pin connect -Vin
Control (Negative Logic,Tip/P)	• OFF	• CNT Pin left open or connect to +Vin