

FEATURES

- ◆ Industry Standard Pinout
- ◆ 1kVDC & 2kVDC Isolation
- ◆ Operating Temperature: -40°C ~ + 85°C
- ◆ High efficiency up to 80%
- ◆ No Heatsink Required
- ◆ Internal SMD construction
- ◆ Power density up to 0.85W/cm³
- ◆ No Extern. Components Required
- ◆ 5V, 9V, 12V and 15V output
- ◆ No heatsink required
- ◆ Custom Solutions Available
- ◆ UL 94V-0 package material
- ◆ No external components required
- ◆ Industry standard pinout
- ◆ Power sharing on output
- ◆ MTTF up to 3.4 million hours

MODEL SELECTION

B^①05^②05^③X^④D^⑤-1W25(250)^⑥

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ Fixed Input
- ⑤ DIP8 Package style
- ⑥ Rated Power (Output current)

APPLICATIONS

The A-XD-1W25 & B-XD-1W25 series of DC/DC converters is particularly suited to isolating and/or converting DC power rails. The galvanic isolation allows the device to be configured to provide an isolated negative rail in systems where only positive rails exist. The wide temperature range guarantees startup from -40°C and full 1.25 watt output at 85°C. For lower ripple, refer to output ripple reduction section.



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SELECTION GUIDE

Order code	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)
B0303XD-1W25	3.3	3.3	378	70
B0503XD-1W25	5	3.3	378	70
B0903XD-1W25	9	3.3	378	70
B1203XD-1W25	12	3.3	378	70
B1503XD-1W25	15	3.3	378	70
B2403XD-1W25	24	3.3	378	70
B0305XD-1W25	3.3	5	250	70
B0505XD-1W25	5	5	250	70
B0905XD-1W25	9	5	250	70
B1205XD-1W25	12	5	250	70
B1505XD-1W25	15	5	250	70
B2405XD-1W25	24	5	250	70
B0309XD-1W25	3.3	9	140	78
B0509XD-1W25	5	9	140	78
B0909XD-1W25	9	9	140	78
B1209XD-1W25	12	9	140	78
B1509XD-1W25	15	9	140	78
B2409XD-1W25	24	9	140	78
B0312XD-1W25	3.3	12	104	79
B0512XD-1W25	5	12	104	79
B0912XD-1W25	9	12	104	79
B1212XD-1W25	12	12	104	79
B1512XD-1W25	15	12	104	79
B2412XD-1W25	24	12	104	79
B0315XD-1W25	3.3	15	84	80
B0515XD-1W25	5	15	84	80
B0915XD-1W25	9	15	84	80
B1215XD-1W25	12	15	84	80
B1515XD-1W25	15	15	84	80
B2415XD-1W25	24	15	84	80
B0324XD-1W25	3.3	24	52	80
B0524XD-1W25	5	24	52	80
B0924XD-1W25	9	24	52	80
B1224XD-1W25	12	24	52	80
B1524XD-1W25	15	24	52	80
B2424XD-1W25	24	24	52	80

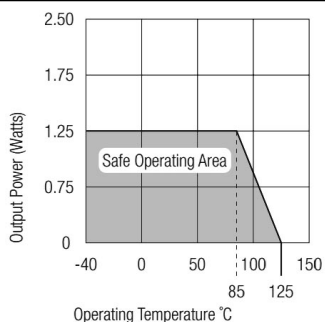
All specifications typical at TA=25 ° C, nominal input voltage and rated output current unless otherwise specified.

SELECTION GUIDE

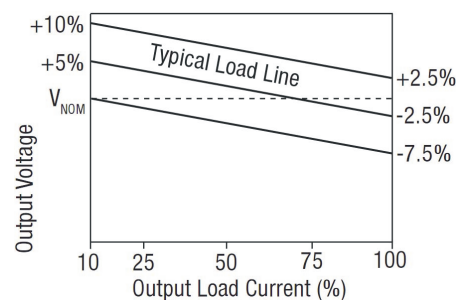
Order code	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)
A0303XD-1W25	3.3	±3.3	±189	70
A0503XD-1W25	5	±3.3	±189	70
A0903XD-1W25	9	±3.3	±189	70
A1203XD-1W25	12	±3.3	±189	70
A1503XD-1W25	15	±3.3	±189	70
A2403XD-1W25	24	±3.3	±189	70
A0305XD-1W25	3.3	±5	±125	70
A0505XD-1W25	5	±5	±125	70
A0905XD-1W25	9	±5	±125	70
A1205XD-1W25	12	±5	±125	70
A1505XD-1W25	15	±5	±125	70
A2405XD-1W25	24	±5	±125	70
A0309XD-1W25	3.3	±9	±70	75
A0509XD-1W25	5	±9	±70	75
A0909XD-1W25	9	±9	±70	75
A1209XD-1W25	12	±9	±70	75
A1509XD-1W25	15	±9	±70	75
A2409XD-1W25	24	±9	±70	75
A0312XD-1W25	3.3	±12	±52	78
A0512XD-1W25	5	±12	±52	78
A0912XD-1W25	9	±12	±52	78
A1212XD-1W25	12	±12	±52	78
A1512XD-1W25	15	±12	±52	78
A2412XD-1W25	24	±12	±52	78
A0315XD-1W25	3.3	±15	±42	80
A0515XD-1W25	5	±15	±42	80
A0915XD-1W25	9	±15	±42	80
A1215XD-1W25	12	±15	±42	80
A1515XD-1W25	15	±15	±42	80
A2415XD-1W25	24	±15	±42	80
A0324XD-1W25	3.3	±24	±26	80
A0524XD-1W25	5	±24	±26	80
A0924XD-1W25	9	±24	±26	80
A1224XD-1W25	12	±24	±26	80
A1524XD-1W25	15	±24	±26	80
A2424XD-1W25	24	±24	±26	80

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

Temperature derating graph



Tolerance envelope



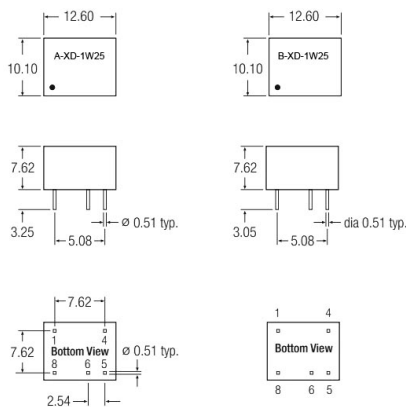
Specifications

Input Voltage		±10%
Input Filter		Capacitor Type
Output Voltage Accuracy		±5%
Line Voltage Regulation		1,2%/1% V Input
Load Voltage Regulation (10% to 100% full load)	3.3V output types	20% max.
	5V output type	15% max.
	9V, 12V, 15V, 24V output types	10% max.
Ripple and Noise (20MHz limited)		100mVp-p max.
Efficiency at Full Load		70% min.
Isolation Voltage		1.000VDC min. (also available with 2.000VDC)
Isolation Resistance (Viso = 500VDC)		10 GΩmin.
Isolation Capacitance		30pF min./80pF max.
Short Circuit Protection		1 Second
Switching Frequency at Full Load		100kHz typ.
Operating Temperature		-40°C to +85°C (see Graph)
Storage Temperature		-55°C to +125°C
Package Weight	Single output types	1.8g
	Dual output types	1.9g

OUTLINE DIMENSIONS & FOOTPRINT DETAILS

MECHANICAL DIMENSIONS

8 PIN DIP Package



All dimensions in inches ±0.01(mm±0.25mm). All pins on a 0.1(2.54) pitch and within ±0.01(0.25) of true position.
Weight: 1.48g (DIP) 1.30g (SIP)

FOOTPRINT DETAILS

Single

Dual

Pin	Function	Pin	Function
1	-Vin	1	-Vin
4	+Vin	4	+Vin
5	+Vout	5	+Vout
6	NC	6	Com
8	-Vout	8	-Vout

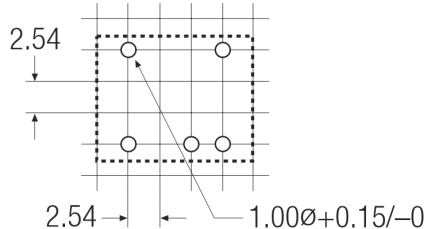
NC: no connect

**Specifications can be changed any time without notice.
No parallel connection or plug and play.**

Note:

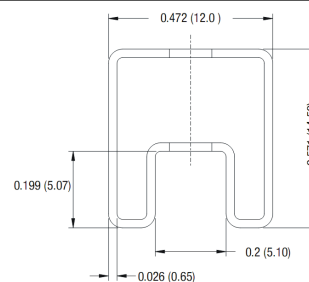
- The load shouldn't be less than 10%, otherwise ripple will increase dramatically.
- Operation under 10% load will not damage the converter; However, they may not meet all specification listed.
- All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
- In this data sheet, all the test methods of indications are based on corporate standards.

Recommended footprint details



TUBE OUTLINE DIMENSIONS

8 PIN DIP Tube



Unless otherwise stated all dimensions in inches (mm) ±0.5mm.