Electronic Products
Elektronisches Knowhow aus einer Hand

1-2W unregulated DC-DC Converter SMD

Features:

- Up To 1W~2W Unregulated Output Power
- 100% Burned In
- High Efficiency
- SMD Technology
- Low Cost
- UL 94V-0 Package Material
- Custom Solutions Available
- MTBF>2,000,000 Hours
- RoHS Compliant

Specifications:

Output Specifications	Voltage Setpoint Accuracy	+/-3% max
	Temperature Coefficient	+/-0.03%/°C
	Ripple & Noise (20MHz BW)	100mVp-p max
	Line Regulation[1]	+/-1.2% max
	Load Regulation[2]	+/-8% max
	Minimum Load	10% of Full Load
	Short Circuit Protection	Momentary
	Transient Response[3]	200uS max
Input Specifications	Input Voltage Range	+/-10% max
	Input Filter	Capacitor Type
	Protection	Fuse Recommended
Environmental Specifications	Operating Temperature	-40 °C to +71°C
	Storage Temperature	-55°C to +125°C
	Humidity	95% max
	Cooling	Free-Air Convection
General Specifications	Efficiency	72%-78%
	Isolation Voltage[4]	1000 VDC min
	Isolation Resistance	109 ohms min
	Isolation Capacitance	80pF max
	Switching Frequency	100KHz min
	MTBF[5]	>2,000,000 Hours
	Weight	3g Typ
	Case Material	Non-Conductive Plastic
	Case Size	13.8mm*12.8mm*9.3mm 25.4mm*12.8mm*9.3mm
	Conducted Emissions	EN55022 Class A
	Radiated Emissions	EN55022 Class A

All Specifications Typical at Nominal Line, Full Load, and 25 °C Unless Otherwise Noted.

Footnotes:
[1] Line Regulation is for a 1.0% change in input Voltage.
[2] Load Regulation is for output load current change from 20% to 100%.
[3] 25% Step Load Change.
[4] For 10 seconds.
[5] MIL-HDBK-217F @25°C , Ground Benign.

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Selection Guide 1 W 1000 VDC Isolation

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT[1] CURRENT(mA) FULL LOAD	INPUT[1] CURRENT(mA) NO LOAD	EFF[2] (%)	ISOLATION (VDC)	PACKAGE
SMD05051	5	5	200	283	35	71	1000	A
SMD05091	5	9	111	257	25	78	1000	A
SMD05121	5	12	84	253	26	79	1000	A
SMD05151	5	15	67	253	28	79	1000	A
SMD12051	12	5	200	112	11	74	1000	A
SMD12091	12	9	111	107	11	78	1000	A
SMD12121	12	12	84	102	10	82	1000	A
SMD12151	12	15	67	102	12	82	1000	A

Selection Guide 1.8 W 1000 VDC Isolation

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT[1] CURRENT(mA) FULL LOAD	INPUT[1] CURRENT(mA) NO LOAD	EFF[2] (%)	ISOLATION (VDC)	PACKAGE
SMD050518	5	5	360	500	70	72	1000	B
SMD050918	5	9	200	480	70	75	1000	B
SMD051218	5	12	150	467	70	77	1000	B
SMD051518	5	15	120	467	70	77	1000	B
SMD120518	12	5	360	206	40	73	1000	B
SMD120918	12	9	200	197	40	76	1000	B
SMD121218	12	12	150	192	40	78	1000	B
SMD121518	12	15	120	192	40	78	1000	B

Selection Guide 2 W 1000 VDC Isolation

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT[1] CURRENT(mA) FULL LOAD	INPUT[1] CURRENT(mA) NO LOAD	EFF[2] (%)	ISOLATION (VDC)	PACKAGE
SMD05052	5	5	400	520	40	77	1000	B
SMD05092	5	9	222	506	40	79	1000	B
SMD05122	5	12	167	500	40	80	1000	B
SMD05152	5	15	133	488	40	82	1000	B
SMD12052	12	5	400	214	15	78	1000	B
SMD12092	12	9	222	214	15	78	1000	B
SMD12122	12	12	167	200	15	83	1000	B
SMD12152	12	15	133	196	15	85	1000	B

Note: Other input to output voltages may be available. Please contact factory.

Footnotes: [1] Nominal Input Voltage [2] Nominal Input Voltage, Full Load

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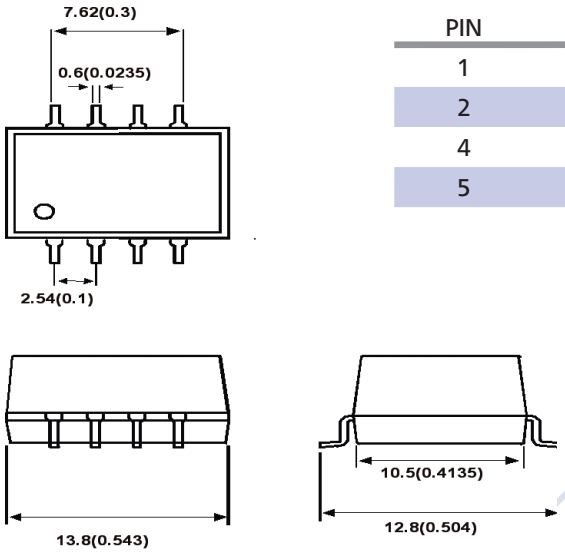
Mechanical Dimensions & Recommended Footprint Details

Package A

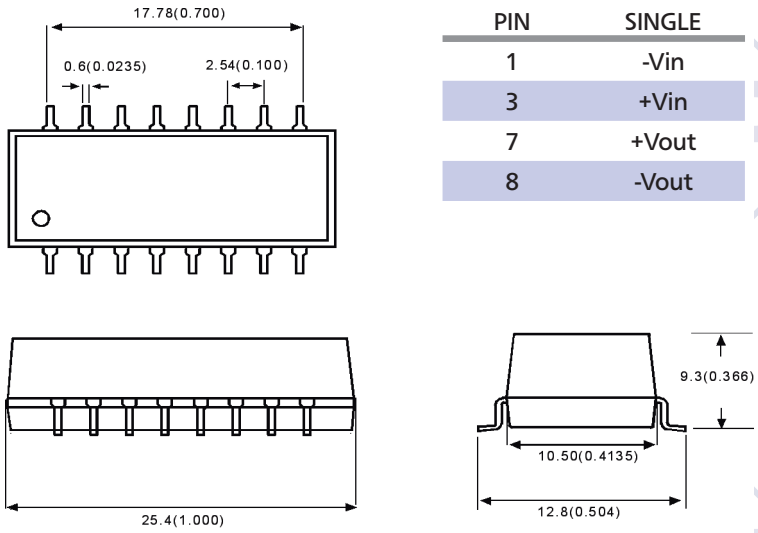


PIN	SINGLE
1	-Vin
2	+Vin
4	-Vout
5	+Vout

Unit:mm(inch)+/-0.25(0.010)

Note: Pin Size is Tolerance 0.50_ ± 0.05mm
All Dimensions In mm (Inches) Tolerance .X or .XX= ± 0.5mm

Package B



PIN	SINGLE
1	-Vin
3	+Vin
7	+Vout
8	-Vout

Unit:mm(inch)+/-0.25(0.010)

Note: Pin Size is Tolerance 0.50_ ± 0.05mm
All Dimensions In mm (Inches) Tolerance .X or .XX= ± 0.5mm

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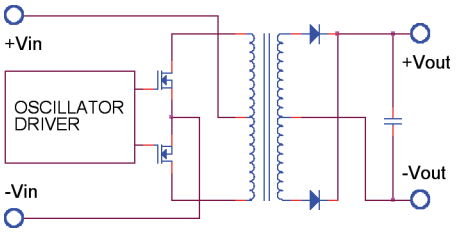
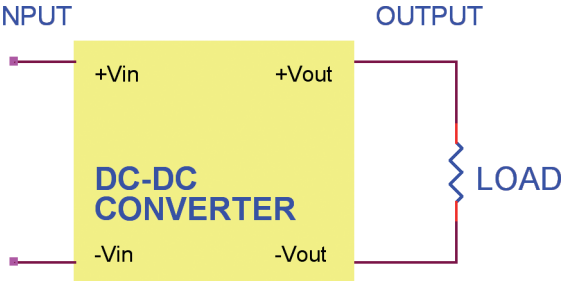
Simplified Schematic & Typical Applications

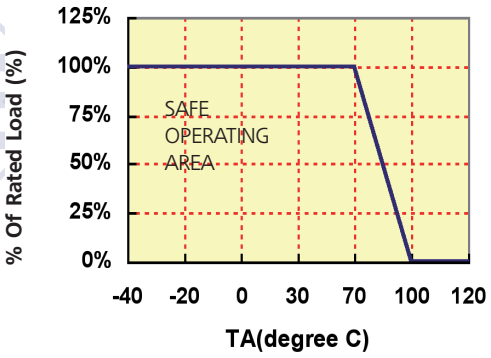




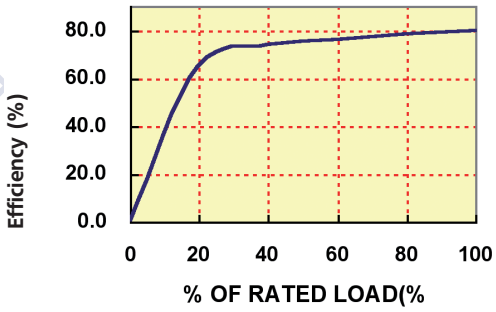
Typical Performance Curves

Specifications typical at Ta=25 °C, nominal input voltage, rated output current unless otherwise specified.

Derating Curve

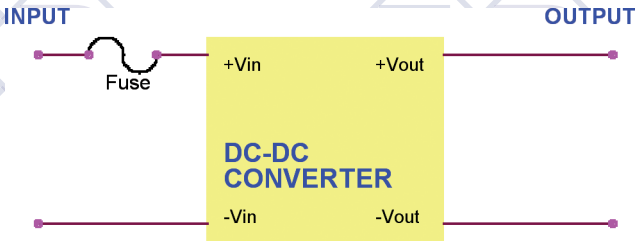


Efficiency Vs Load



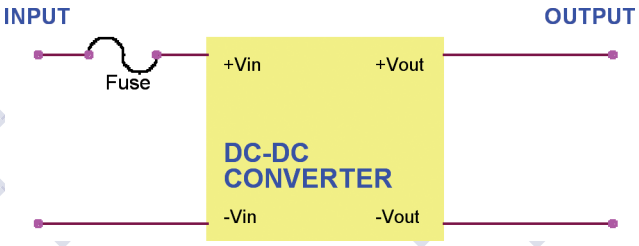
Input Fuse Selection Guide 1 W 1000 VDC Isolation

4.5-5.5V Input Voltage(VDC)	10.8-13.2V Input Voltage(VDC)
400mA Slow-Blow Type	200mA Slow-Blow Type



Input Fuse Selection Guide 1.8 W– 2 W 1000 VDC Isolation

4.5-5.5V Input Voltage(VDC)	10.8-13.2V Input Voltage(VDC)
800mA Slow-Blow Type	300mA Slow-Blow Type



Note: Certain applications may require the installation of external fuse in front of the input.

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EPM-SMD Series Application Notes

External Capacitance Requirements:
Output filtering is required for operation. A minimum of 10uF is needed. Output capacitance may be increased for additional filtering, not to exceed 220uF.
To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250KHz is required.
We Can Offer EMC-Filter According To EN55011/22 Class B.

Negative Outputs:
A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting – OUT as the negative output.

Spezifikationen können jederzeit ohne Vorankündigung geändert werden.

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