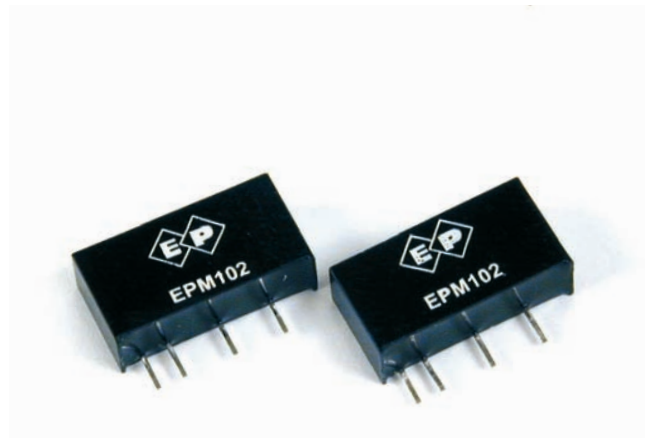


Features:

- 1000 VDC Isolation
- Efficiency Up To 83%
- Internal SMD Technology
- Low Cost
- No Heatsink Required
- 1W Unregulated Output Power
- Single In Line Package
- 100% Burned In
- MTBF⁴ > 2.000 000 Hours



Specifications:

Output Specifications	Voltage Setpoint Accuracy Temperature Coefficient Ripple & Noise (20MHz BW) Line Regulation ¹ Load Regulation ² Minimum Load Short Circuit Protection	+/-2% max +/-0.05%/ °C 100mVp-p max +/-1.2% max +/-8% max 20% of Full Load Momentary
Input Specifications	Input Voltage Range Input Filter Input Reflected Ripple Current Protection	+/-10% max Capacitor Type 50mA _{p-p} max Fuse Recommended
Environmental Specifications	Operating Temperature Storage Temperature Humidity Cooling	-40 °C to +71 °C -55 °C to +125 °C 95% max Free-Air Convection
General Specifications	Efficiency Isolation Voltage ³ Single/Dual Twin In to Out Out to Out Isolation Resistance Switching Frequency Isolation Capacitance Weight Case Material Case Size Conducted Emissions Radiated Emissions	70%-83% 1500-3000VDC min 1000 VDC 500 VDC 10 ⁹ ohms min 100 KHz min 80pF max 2.1g Typ Non-Conductive Plastic 19.6mm*6.1mm*10.2mm 19.6mm*7.1mm*10.2mm EN55022 Class A 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 1500VDC for 10 sec., 3000VDC form 3 sec. ⁴ MIL-HDBK-217F @25°C , Ground Benign

Selection Guide 1W 1000VDC Isolation

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁵ CURRENT(mA)		EFF (%) ⁶	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
EPM 101	5	3.3	300	274	35	73	1500	A/B/AY
EPM 102	5	5	200	283	35	71	1500	A/B/E/AY
EPM 103	5	9	111	257	34	78	1500	A/B/E/AY
EPM 104	5	12	84	253	33	79	1500	A/B/E/AY
EPM 105	5	15	67	253	34	79	1500	A/B/E/AY
EPM 106	5	+/-5	+/-100	278	35	72	1500	A/B/AY
EPM 107	5	+/-9	+/-56	260	34	77	1500	A/B/AY
EPM 108	5	+/-12	+/-42	253	33	79	1500	A/B/AY
EPM 109	5	+/-15	+/-34	260	34	77	1500	A/B/AY
EPM 110	9	9	111	148	24	75	1500	A/B/AY
EPM 111	12	3.3	300	112	14	74	1500	A/B/AY
EPM 112	12	5	200	112	15	74	1500	A/B/E/AY
EPM 113	12	9	111	107	14	78	1500	A/B/E/AY
EPM 114	12	12	84	102	14	82	1500	A/B/E/AY
EPM 115	12	15	67	102	14	82	1500	A/B/E/AY
EPM 116	12	+/-5	+/-100	112	15	74	1500	A/B/AY
EPM 118	12	+/-12	+/-42	105	14	79	1500	A/B/AY
EPM 119	12	+/-15	+/-34	101	15	83	1500	A/B/AY
EPM 121	24	3.3	300	57	9	73	1500	C/CY
EPM 122	24	5	200	57	9	73	1500	C/CY
EPM 123	24	9	111	56	9	75	1500	C/CY
EPM 124	24	12	84	54	9	77	1500	C/CY
EPM 125	24	15	67	52	10	80	1500	C/CY
EPM 126	24	+/-5	+/-100	57	10	73	1500	C/CY
EPM 128	24	+/-12	+/-42	54	10	77	1500	C/CY
EPM 129	24	+/-15	+/-34	52	9	80	1500	C/CY
EPM 130	24	24	42	54	9	77	1500	C/CY

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

Footnotes: ⁵ Nominal Input Voltage
⁶ Nominal Input Voltage,full Load

Selection Guide 1W Dual Seperate Output

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁵ CURRENT(mA)		EFF (%) ⁶	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
EPMS-12	5	V1:+5 V V2:+3.3 V	V1:+100 V2:+152	268	34	70	1500	F
EPMS-13	5	V1:+5 V V2:+5 V	V1:+100 V2:+100	255	34	78	1500	F
EPMS-14	5	V1:+5 V V2:+9 V	V1:+100 V2:+56	251	33	80	1500	F
EPMS-15	5	V1:+5 V V2:+12 V	V1:+100 V2:+42	250	35	80	1500	F
EPMS-16	5	V1:+5 V V2:+15 V	V1:+100 V2:+34	250	35	80	1500	F
EPMS-17	12	V1:+5 V V2:+5 V	V1:+100 V2:+100	119	15	70	1500	F
EPMS-18	12	V1:+5 V V2:+9 V	V1:+100 V2:+56	104	14	80	1500	F
EPMS-19	12	V1:+5 V V2:+12 V	V1:+100 V2:+42	102	14	82	1500	F
EPMS-20	12	V1:+5 V V2:+15 V	V1:+100 V2:+34	104	14	80	1500	F
EPMS-21	24	V1:+3.3 V V2:+3.3 V	V1:+152 V2:+152	60	11	70	1500	F
EPMS-22	24	V1:+5 V V2:+5 V	V1:+100 V2:+100	60	11	70	1500	F
EPMS-23	24	V1:+12 V V2:+12 V	V1:+41 V2:+41	52	10	80	1500	F

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

Footnotes: ⁵ Nominal Input Voltage
⁶ Nominal Input Voltage,full Load

Selection Guide 1W 3000VDC Isolation

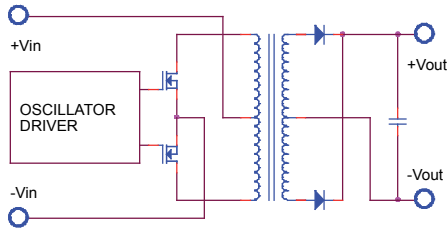
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁵ CURRENT(mA)		EFF (%) ⁶	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
EPM 200	3.3	5	200	378	35	80	3000	D
EPM 201	5	3.3	300	274	35	73	3000	B
EPM 202	5	5	200	283	34	71	3000	B
EPM 203	5	9	111	257	34	78	3000	B
EPM 204	5	12	84	255	34	78	3000	B
EPM 205	5	15	67	253	35	79	3000	B
EPM 206	5	+/-5	+/-100	274	35	73	3000	B
EPM 208	5	+/-12	+/-42	253	35	79	3000	B
EPM 209	5	+/-15	+/-34	253	34	79	3000	B
EPM 210	12	3.3	300	112	14	74	3000	B
EPM 211	12	5	200	112	14	74	3000	B
EPM 212	12	9	111	107	15	78	3000	B
EPM 213	12	12	84	102	13	82	3000	B
EPM 214	12	15	67	103	14	81	3000	B
EPM 215	12	+/-5	+/-100	112	14	74	3000	B
EPM 217	12	+/-12	+/-42	101	15	83	3000	B
EPM 218	12	+/-15	+/-34	101	14	83	3000	B
EPM 219	24	3.3	300	57	10	73	3000	D
EPM 220	24	5	200	57	10	73	3000	D
EPM 221	24	9	111	56	10	75	3000	D
EPM 222	24	12	84	54	10	77	3000	D
EPM 223	24	15	67	52	9	80	3000	D
EPM 224	24	+/-5	+/-100	57	10	73	3000	D
EPM 226	24	+/-12	+/-42	54	9	77	3000	D
EPM 227	24	+/-15	+/-34	52	10	80	3000	D

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

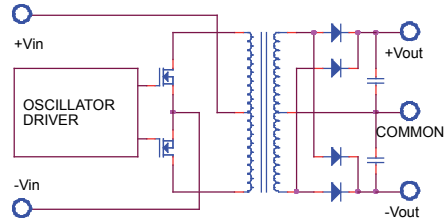
Footnotes: ⁵ Nominal Input Voltage
⁶ Nominal Input Voltage,full Load

Simplified Schematic

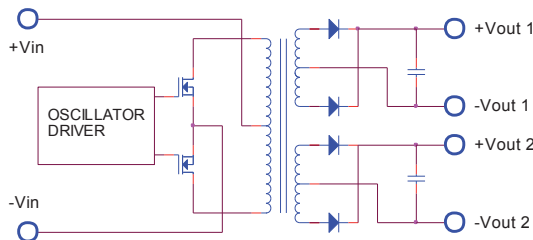
Single Output



Dual Output



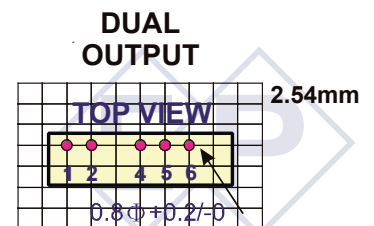
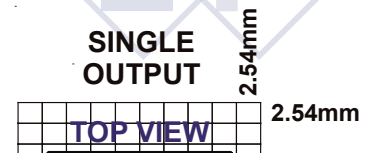
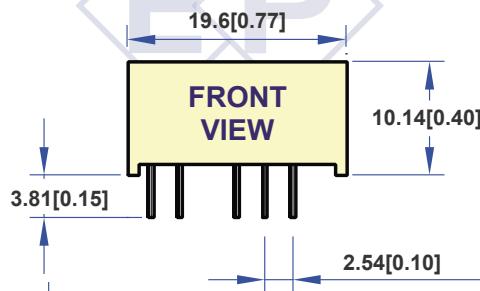
Twin Output



Mechanical Dimensions & Recommended Footprint Details

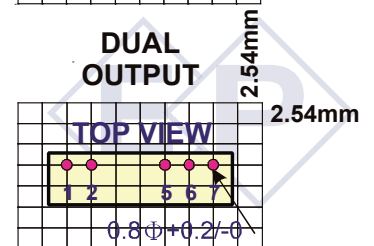
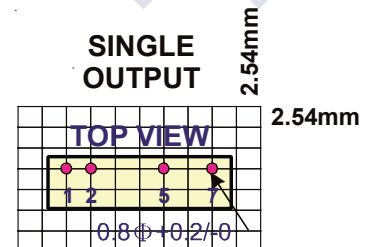
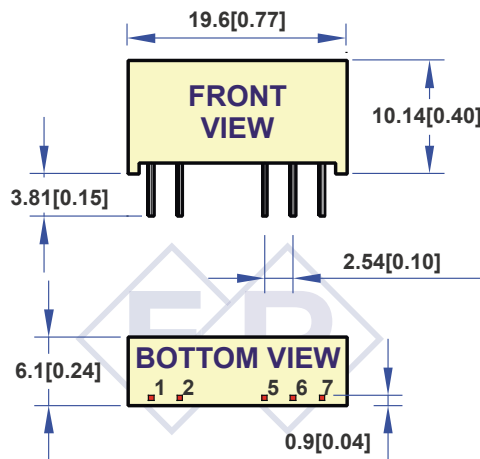
Package A

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	NP	Common
6	+Vout	+Vout



Package B

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	NP	Common
7	+Vout	+Vout

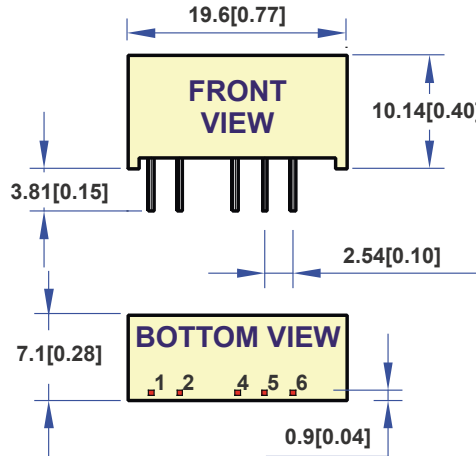


Note: Pin Size is Tolerance 0.5 Ø ±0.05 mm, All Dimensions in mm (Inches), Tolerance .x or .xx = ±0.05 mm

Mechanical Dimensions & Recommended Footprint Details

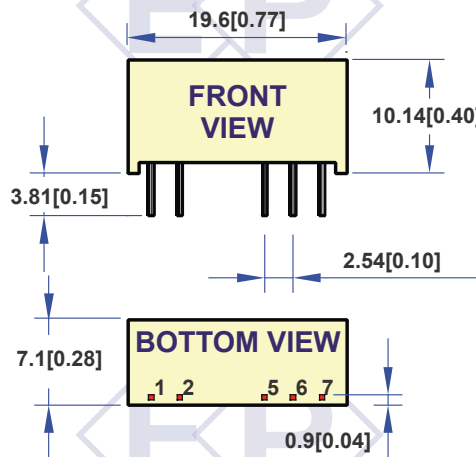
Package C

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	NP	Common
6	+Vout	+Vout



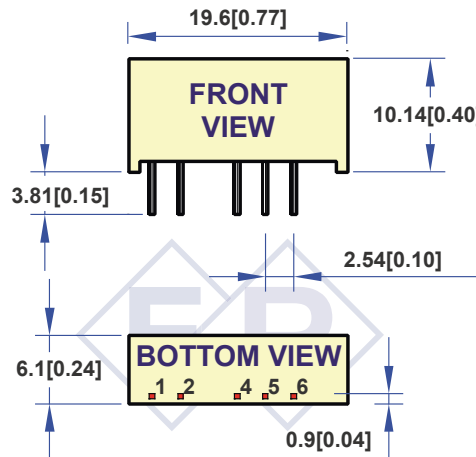
Package D

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	NP	Common
7	+Vout	+Vout



Package E

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
4	NP	-Vout
5	-Vout	Common
6	+Vout	+Vout

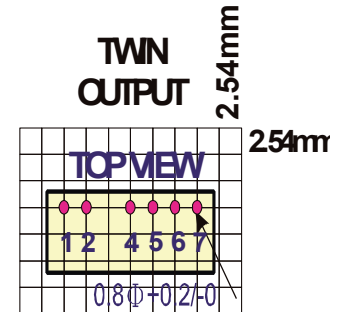
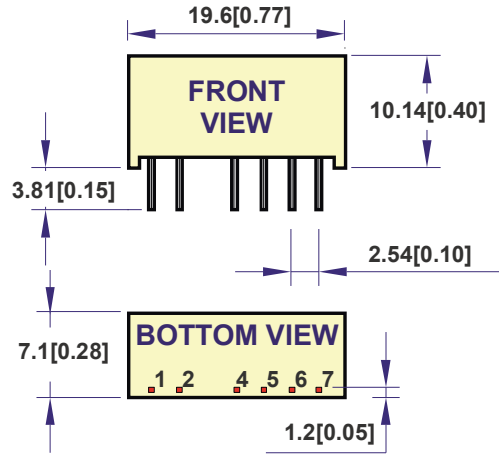


Note: Pin Size is Tolerance 0.5 $\varnothing \pm 0.05$ mm, All Dimensions in mm (Inches), Tolerance .x or .xx = ± 0.05 mm

Mechanical Dimensions & Recommended Footprint Details

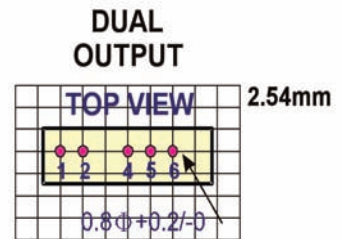
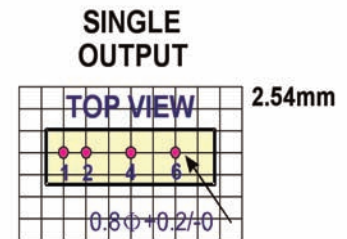
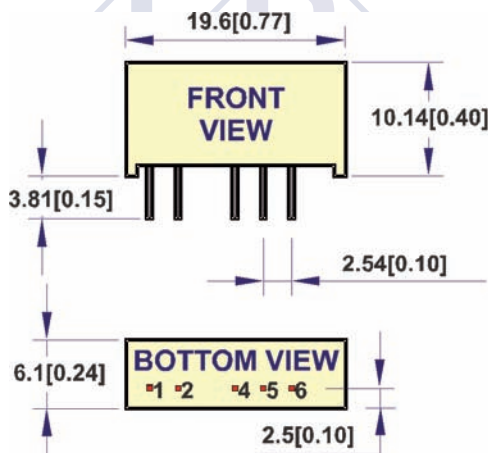
Package F

PIN	TWIN
1	+Vin
2	-Vin
4	+5 V/Vout 1
5	-5 V/Vout 1
6	+Vout 2
7	- Vout 2



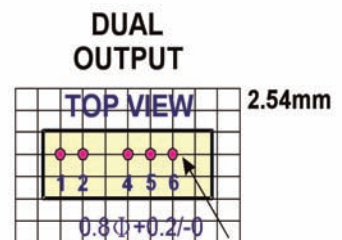
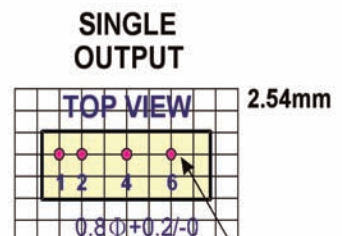
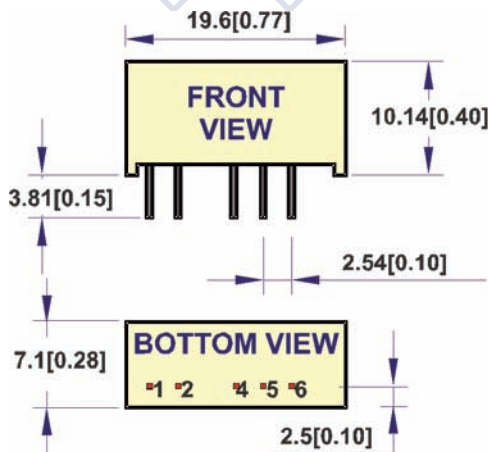
Package AY

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	NP	Common
6	+Vout	+Vout



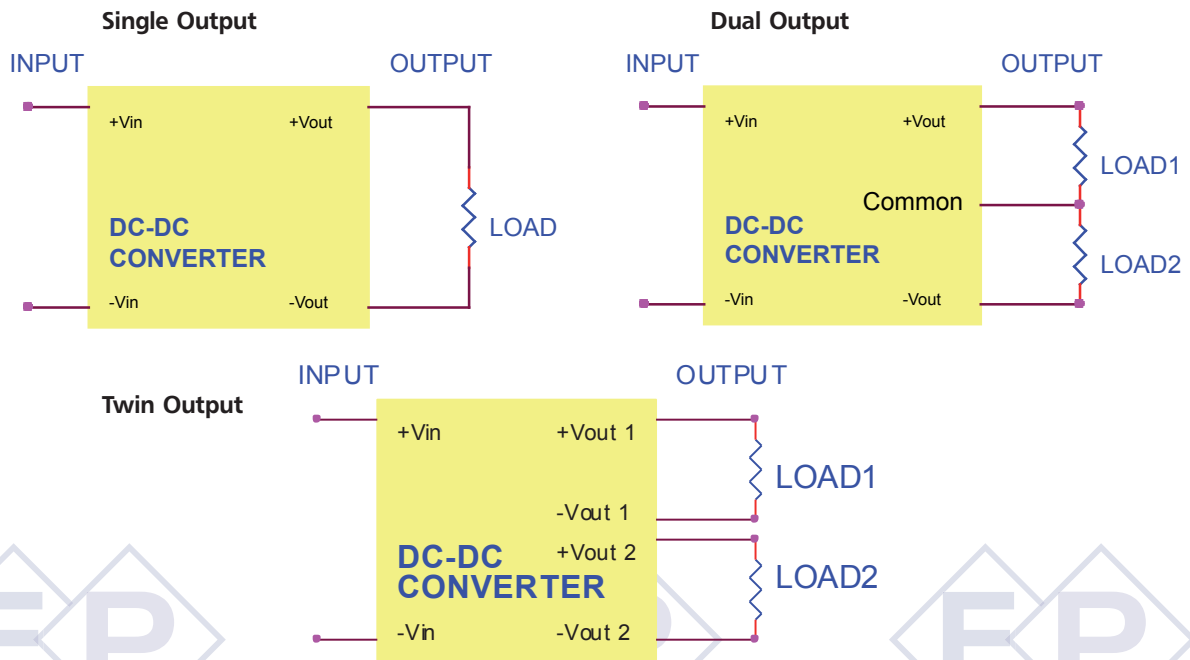
Package CY

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	NP	Common
6	+Vout	+Vout



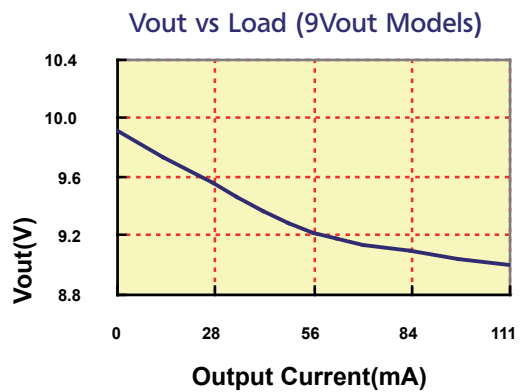
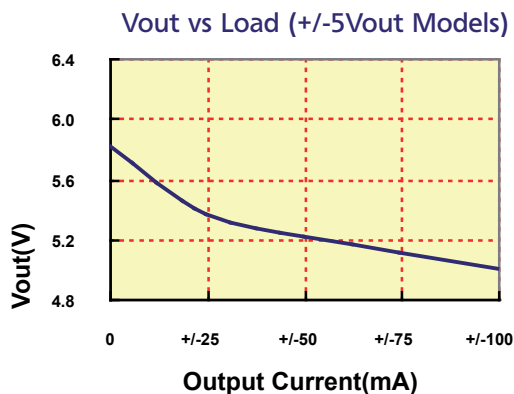
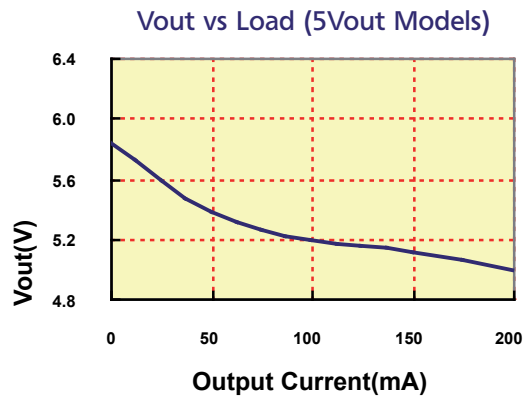
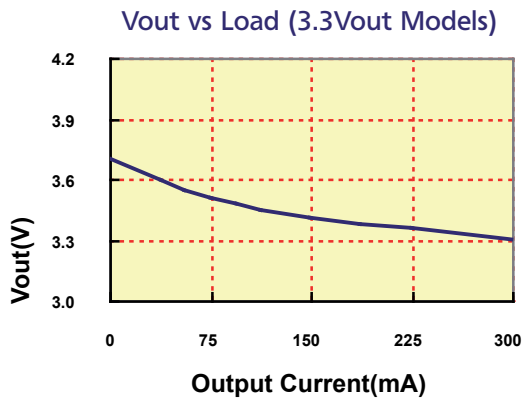
Note: Pin Size is Tolerance 0.5 \emptyset \pm 0.05 mm, All Dimensiones in mm (Inches), Tolerance .x or .xx = \pm 0.05 mm

Typical Applications



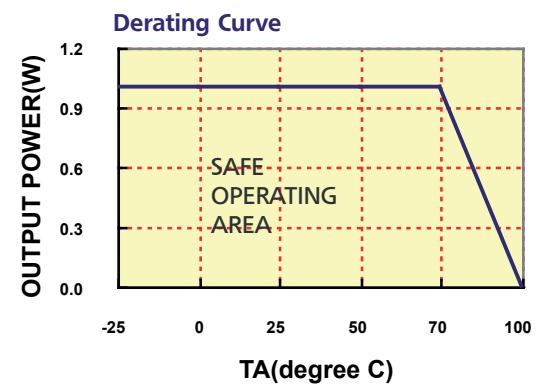
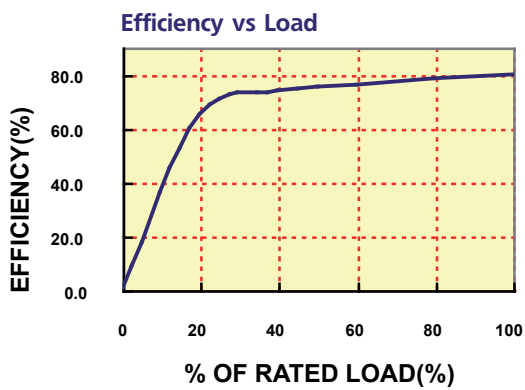
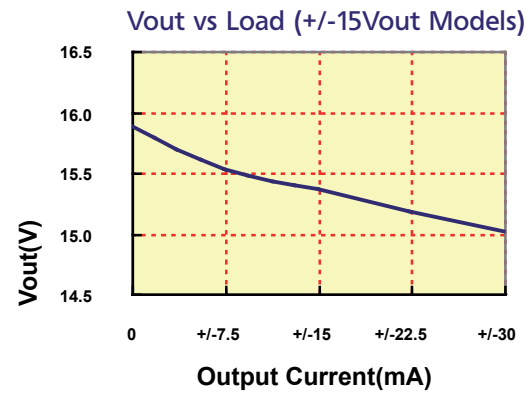
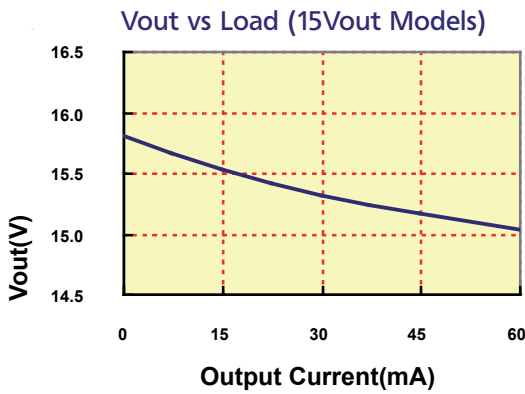
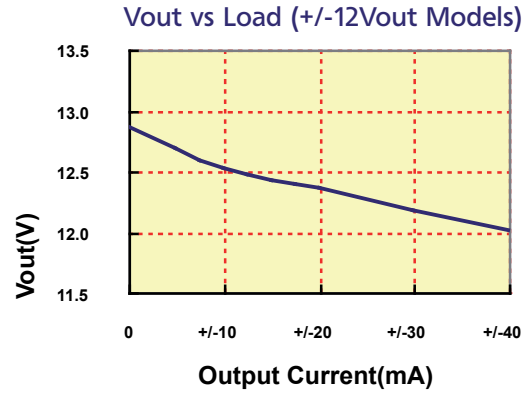
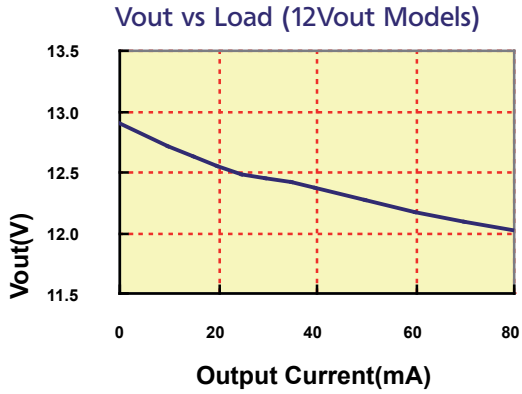
Typical Performance Curves

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



Typical Performance Curves

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



Input Fuse Selection Guide

4.5-5.5V Input Voltage(VDC)	10.8-13.2V Input Voltage(VDC)	21.6-26.4V Input Voltage(VDC)
800 mA Slow- Blow Type	300 mA Slow- Blow Type	150 mA Slow- Blow Type



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

EPM 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 0.5ohm from DC to 250KHz is required.

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.

