P47WG-xxxxE/Z4:1LF

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PM7W-SERIES Rev.11-2008

- ✓ 15 Watt
- ✓ **4:1 Ultra Wide** Input
- ✓ **2" x 1"** Case
- ✓ **1.5 kV** DC I/O Isolation
- ✓ Regulated Output
- ✓ **Single** and **Dual** Output
- ✓ Continuous Short Circuit Prot.

The PM7W series P47WG-xxxxE/Z4:1LF is a family of cost effective 15 W, single & dual output DC-DC converters with a ultra wide input range of 4:1. These converters are encapsulated in nickel coated brass 2"x1" case with high performance features: 1500VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation, high efficiency operation and output voltage accuracy of ±1% maximum.

All specifications typical at Ta=25℃, nominal input voltage and full load unless otherwise specified

Input Specifications

Voltage Range	4:1 Ultra Wide Input (See Table)
Input Filter	PI Type
Input Reflected Ripple Current[1]	35 mA pk-pk
Start up Time (Nom. Vin and constant resistive load)	20mS, typ.

Output Specifications

Voltage Accuracy	± 1%
Short Circuit Protection	Indefinite (Automatic Recovery)
Over Current Protection	140% of max. Iout
Line Regulation	± 0.5%
Load Regulation (10% - 100%)	± 0.5% (10% - 100% load) ± 1.0% (< 10% load)
Cross Regulation[3]	± 5%
Ripple and Noise (20Mhz bandwidth)	75 mV pk-pk
Temperature Coefficient	± 0.02% / ℃

General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	1500 VDC
I/O Isolation Capacitance	1200 pF, typ.
I/O Isolation Resistance	1000 M Ohm
Switching Frequency	300 kHz, typ.
Humidity	95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)	> 1.121 Mhrs

Physical Specifications

Case Material	Nickel Coated Brass
Potting Material	Epoxy (UL94V-0 rated)
Weight	~ 30g, typ.

Environment Specifications

Operating Temperature	-40 to +60℃ (ambient)
Maximum Case Temperature	100℃
Storage Temperature	-40 to +125℃
Cooling	Free Air Convection
RoHS Conform	Soldering 260℃, max. (1.5mm from case 10s.)

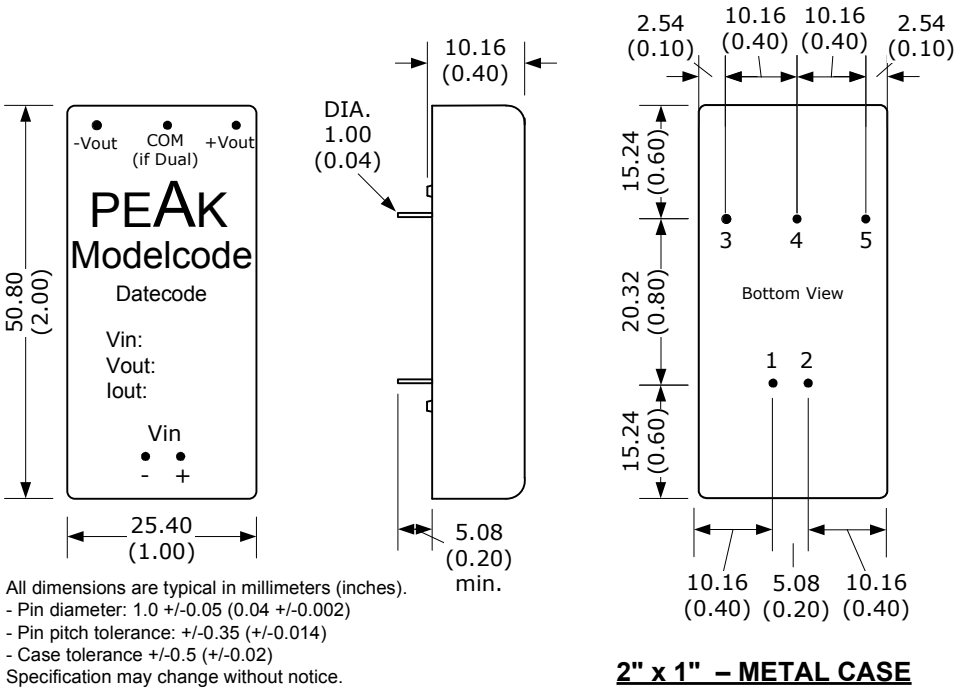
Selection Guide
Single and Dual Output

Order #	Input Voltage (VDC)	Input Current No Load (mA)	Input Current Full Load (mA)	Output Voltage (VDC)	Output Current Min. Load (mA)	Output Current Full Load (mA)	Efficiency (%)	Capacitor Load (uF)[2]
SINGLE OUTPUT								
P47WG-243R3E4:1LF	9-36	25	515	3.3	0	3000	80	3300
P47WG-2405E4:1LF	9-36	25	753	5	0	3000	83	3300
P47WG-247R2E4:1LF	9-36	25	744	7.2	0	2083	84	1000
P47WG-2409E4:1LF	9-36	25	744	9	0	1666	84	680
P47WG-2412E4:1LF	9-36	25	735	12	0	1250	85	680
P47WG-2415E4:1LF	9-36	25	726	15	0	1000	86	470
P47WG-483R3E4:1LF	18-72	20	257	3.3	0	3000	80	3300
P47WG-4805E4:1LF	18-72	20	376	5	0	3000	83	3300
P47WG-487R2E4:1LF	18-72	20	372	7.2	0	2083	84	1000
P47WG-4809E4:1LF	18-72	20	372	9	0	1666	84	1000
P47WG-4812E4:1LF	18-72	20	367	12	0	1250	85	680
P47WG-4815E4:1LF	18-72	20	363	15	0	1000	86	470
DUAL OUTPUT								
P47WG-2405Z4:1LF	9-36	25	753	± 5	0	± 1500	83	± 2200
P47WG-247R2Z4:1LF	9-36	25	744	± 7.2	0	± 1041	84	± 470
P47WG-2409Z4:1LF	9-36	25	744	± 9	0	± 833	84	± 470
P47WG-2412Z4:1LF	9-36	25	735	± 12	0	± 625	85	± 470
P47WG-2415Z4:1LF	9-36	25	726	± 15	0	± 500	86	± 330
P47WG-4805Z4:1LF	18-72	20	376	± 5	0	± 1500	83	± 2200
P47WG-487R2Z4:1LF	18-72	20	372	± 7.2	0	± 1041	84	± 470
P47WG-4809Z4:1LF	18-72	20	372	± 9	0	± 833	84	± 470
P47WG-4812Z4:1LF	18-72	20	367	± 12	0	± 625	85	± 470
P47WG-4815Z4:1LF	18-72	20	363	± 15	0	± 500	86	± 330

If you need other specifications, please enquire.

Notes:

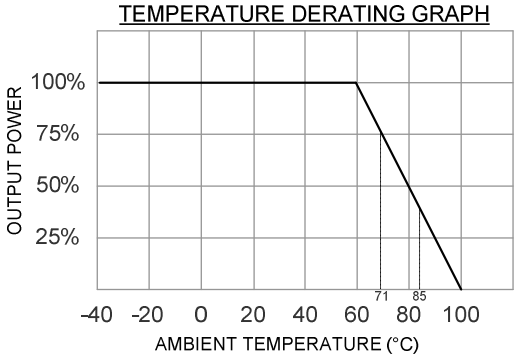
Package / Pinning / Derating



All dimensions are typical in millimeters (inches).
- Pin diameter: 1.0 +/-0.05 (0.04 +/-0.002)
- Pin pitch tolerance: +/-0.35 (+/-0.014)
- Case tolerance +/-0.5 (+/-0.02)

Specification may change without notice.

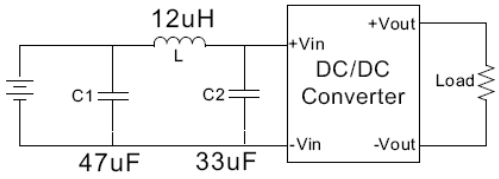
2" x 1" – METAL CASE



PIN CONNECTIONS		
#	SINGLE	DUAL
1	+Vin	+Vin
2	- Vin	- Vin
3	+Vout	+Vout
4	Omitted	Common
5	- Vout	- Vout

App Notes:

[1] = Measured Input reflected ripple current with a simulated source inductance of 12uH.
[2] = Tested by minimal Vin and constant resistive load.
[3] = One load is 25% to 100% load, the other load is 100% load, the output voltage variable rate is within ±5%.
[4] = Input filter components (C1, C2, L) are used to help meet conducted emissions requirement for the module. These components should be mounted as close as possible to the module. All leads should be minimized to decrease radiated noise.



EMC SPECIFICATIONS		
Radiated Emissions	EN 55022	CLASS A
Conducted Emissions	EN 55022	CLASS A
ESD	IEC 61000-4-2	Perf. Criteria B
RS	IEC 61000-4-3	Perf. Criteria A
EFT	IEC 61000-4-4	Perf. Criteria B
CS	IEC 61000-4-6	Perf. Criteria A
PFMF	IEC 61000-4-8	Perf. Criteria A