

# P6KU-xxxxZLF



## PMA-SERIES

Rev.11-2008

- ✓ 1 Watt
- ✓ Unregulated
- ✓ **Dual** Output
- ✓ **DIP8** Case
- ✓ **3 kV** DC I/O Isolation
- ✓ Low Ripple and Noise

The PMA series P6KU-xxxxZLF is a family of cost effective 1 W dual output DC/DC converters. These converters are in an ultra miniature DIP8 case. Devices are encapsulated. High performance features: 3000VDC input/output isolation, high efficiency operation, output voltage accuracy of  $\pm 3\%$  maximum, input range of  $\pm 10\%$  tolerance and low output ripple and noise.

All specifications typical at  $T_a=25^\circ\text{C}$ , nominal input voltage and full load unless otherwise specified

### Input Specifications

Voltage Range	$\pm 10\%$
Input Filter	Capacitor
Input Reflected Ripple Current <sup>1</sup>	20 mA pk-pk

### Output Specifications

Voltage Accuracy	$\pm 3\%$
Short Circuit Protection	Short Term
Line Regulation	$\pm 1.2\% / 1\% V_{in}$ Change
Load Regulation (20% - 100%)	$\pm 10\%$ (3.3V <sub>out</sub> Models: $\pm 20\%$ )
Ripple and Noise (20Mhz bandwidth)	100 mV pk-pk
Temperature Coefficient	$\pm 0.02\% / ^\circ\text{C}$

### General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	3000 VDC
I/O Isolation Capacity	60 pF, typ.
I/O Isolation Resistance	1000 MOhm
Switching Frequency	80 kHz (Variable)
Humidity	95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)	> 1.121 Mhrs

### Physical Specifications

Case Material	Non Conductive Black Plastic (UL94V-0 rated)
Potting Material	Epoxy (UL94V-0 rated)
Weight	~ 1.8g, typ.

### Environment Specifications

Operating Temperature	-40 to +85 $^\circ\text{C}$ (ambient)
Maximum Case Temperature	100 $^\circ\text{C}$
Storage Temperature	-40 to +125 $^\circ\text{C}$
Cooling	Free Air Convection
RoHS Conform	Soldering 260 $^\circ\text{C}$ , max. (1.5mm from case 10s.)

# Selection Guide

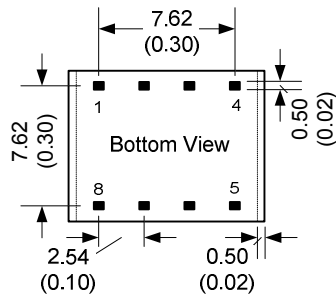
## Dual Output

Order #	Input Voltage (VDC)	Input Current No Load (mA)	Input Current Full Load (mA)	Output Voltage (VDC)	Output Current Full Load (mA)	Efficiency (%)	Capacitor Load (uF) <sup>2</sup>
<b>DUAL OUTPUT</b>							
P6KU-053R3ZLF	5	30	285	± 3.3	± 152	70	± 100
P6KU-0505ZLF	5	30	277	± 5	± 100	72	± 100
P6KU-057R2ZLF	5	30	277	± 7.2	± 69	72	± 100
P6KU-0509ZLF	5	30	263	± 9	± 56	76	± 100
P6KU-0512ZLF	5	30	300	± 12	± 50	80	± 100
P6KU-0515ZLF	5	30	263	± 15	± 33	76	± 100
P6KU-0518ZLF	5	30	263	± 18	± 28	76	± 100
P6KU-0524ZLF	5	30	300	± 24	± 25	80	± 100
P6KU-123R3ZLF	12	15	119	± 3.3	± 152	70	± 100
P6KU-1205ZLF	12	15	115	± 5	± 100	72	± 100
P6KU-127R2ZLF	12	15	115	± 7.2	± 69	72	± 100
P6KU-1209ZLF	12	15	109	± 9	± 56	76	± 100
P6KU-1212ZLF	12	15	125	± 12	± 50	80	± 100
P6KU-1215ZLF	12	15	109	± 15	± 33	76	± 100
P6KU-1218ZLF	12	15	109	± 18	± 28	76	± 100
P6KU-1224ZLF	12	25	128	± 24	± 25	78	± 100
P6KU-243R3ZLF	24	10	58	± 3.3	± 152	71	± 100
P6KU-2405ZLF	24	10	57	± 5	± 100	73	± 100
P6KU-247R2ZLF	24	10	57	± 7.2	± 69	73	± 100
P6KU-2409ZLF	24	10	55	± 9	± 56	75	± 100
P6KU-2412ZLF	24	10	62	± 12	± 50	80	± 100
P6KU-2415ZLF	24	10	54	± 15	± 33	77	± 100
P6KU-2418ZLF	24	10	54	± 18	± 28	77	± 100
P6KU-2424ZLF	24	10	62	± 24	± 25	80	± 100

If you need other specifications, please enquire.

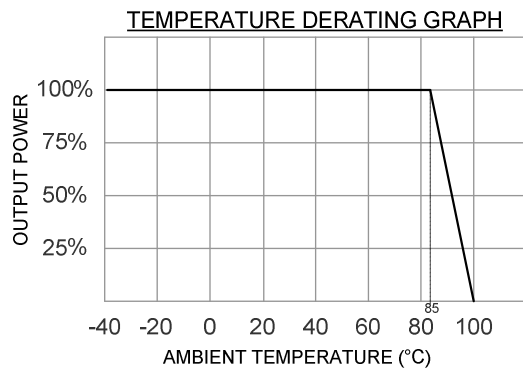
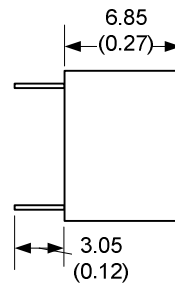
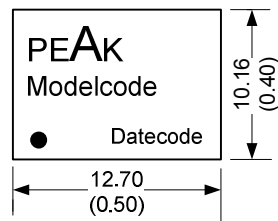
Notes:

# 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.

## DIP 8 – PLASTIC CASE



PIN CONNECTIONS	
#	DUAL
1	- Vin
4	+Vin
5	+Vout
7	Common
8	- Vout
Others	Omitted

### App Notes:

<sup>1</sup> = Measured Input reflected ripple current with a simulated source inductance of 12uH.

<sup>2</sup> = Tested by minimal Vin and constant resistive load.

- Operation under no-load conditions will not damage these devices, but they will not observe the listed specifications.

EMC SPECIFICATIONS		
Radiated Emissions	EN 55022 FCC 47CFR Part 15/B	CLASS B CLASS B
ESD	IEC 61000-4-2	Perf. Criteria B
RS	IEC 61000-4-3	Perf. Criteria A