

P10CUI-xxxxZ(H30)LF



PM3-SERIES

Rev.02-2009

- ✓ 2 Watt
- ✓ Unregulated
- ✓ **Dual Separate Output**
- ✓ **SIP7 Case**
- ✓ **1 - 3 kV DC I/O Isolation**
- ✓ Low Ripple and Noise

The PM3 series P10CUI-xxxxZ(H30)LF is a family of cost effective 2 W dual separate output DC/DC converters. These converters are in an ultra miniature SIP7 case. Devices are encapsulated. High performance features: 1000VDC up to 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 ¹	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%)	$\pm 10\%$ (3.3 Vout Models: $\pm 20\%$)
Ripple and Noise (20Mhz bandwidth)	75 mV pk-pk
Temperature Coefficient	$\pm 0.02\% / ^\circ\text{C}$

General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	1000 VDC (3000 VDC optional)*
I/O Isolation Capacity	60 pF, typ.
I/O Isolation Resistance	1000 M Ohm
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	~ 2.7g, 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 (10 mm distance required)
RoHS Conform	Soldering 260 $^\circ\text{C}$, max. (1.5 mm from case 10s.)

Selection Guide

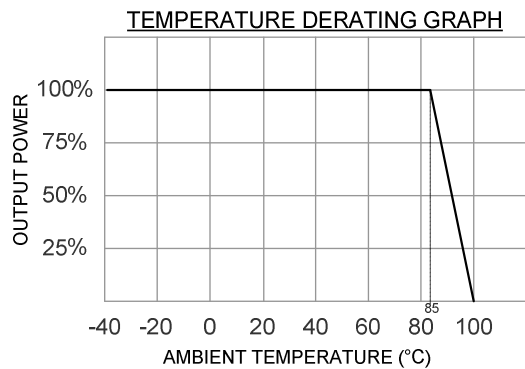
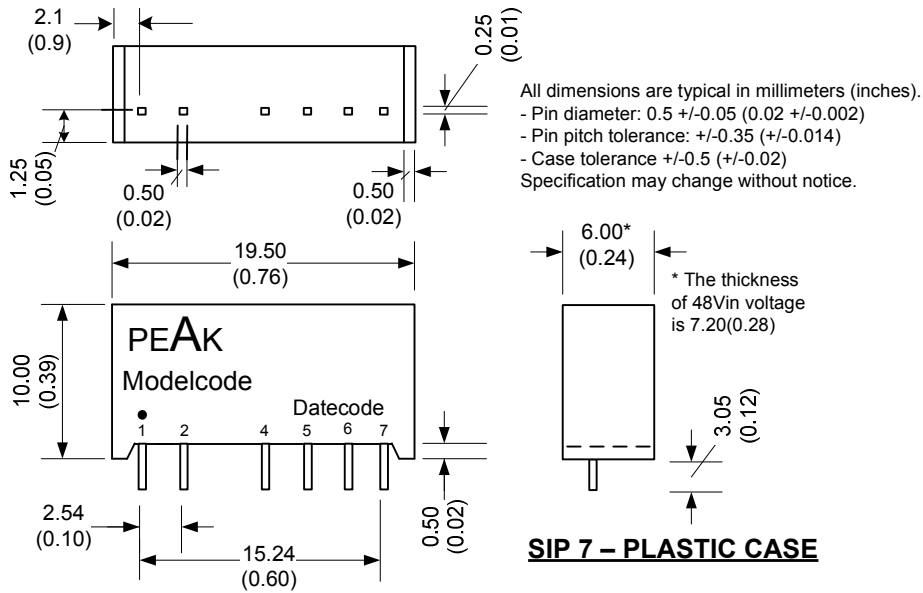
Dual Separate Output

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 (µF) ²
DUAL SEP. OUTPUT							
P10CUI-05053R3ZLF	5	35	519	5, 3.3	200, 200	77	220
P10CUI-05057R2ZLF	5	35	519	5, 7.2	200, 139	77	220
P10CUI-050509ZLF	5	35	519	5, 9	200, 111	77	220
P10CUI-050512ZLF	5	35	500	5, 12	200, 83	80	220
P10CUI-050515ZLF	5	35	500	5, 15	200, 67	80	220
P10CUI-12053R3ZLF	12	25	216	5, 3.3	200, 200	77	220
P10CUI-12057R2ZLF	12	25	216	5, 7.2	200, 139	77	220
P10CUI-120509ZLF	12	25	216	5, 9	200, 111	77	220
P10CUI-120512ZLF	12	25	208	5, 12	200, 83	80	220
P10CUI-120515ZLF	12	25	208	5, 15	200, 67	80	220
P10CUI-24053R3ZLF	24	12	108	5, 3.3	200, 200	77	220
P10CUI-24057R2ZLF	24	12	108	5, 7.2	200, 139	77	220
P10CUI-240509ZLF	24	12	108	5, 9	200, 111	77	220
P10CUI-240512ZLF	24	12	104	5, 12	200, 83	80	220
P10CUI-240515ZLF	24	12	104	5, 15	200, 67	80	220
P10CUI-050505ZLF	5	35	500	5, 5	200, 200	80	220
P10CUI-057R27R2ZLF	5	35	500	7.2, 7.2	139, 139	80	220
P10CUI-050909ZLF	5	35	500	9, 9	111, 111	80	220
P10CUI-051212ZLF	5	35	487	12, 12	83, 83	82	220
P10CUI-051515ZLF	5	35	487	15, 15	67, 67	82	220
P10CUI-120505ZLF	12	25	208	5, 5	200, 200	80	220
P10CUI-127R27R2ZLF	12	25	208	7.2, 7.2	139, 139	80	220
P10CUI-120909ZLF	12	25	208	9, 9	111, 111	80	220
P10CUI-121212ZLF	12	25	203	12, 12	83, 83	82	220
P10CUI-121515ZLF	12	25	198	15, 15	67, 67	84	220
P10CUI-240505ZLF	24	12	104	5, 5	200, 200	80	220
P10CUI-247R27R2ZLF	24	12	104	7.2, 7.2	139, 139	80	220
P10CUI-240909ZLF	24	12	104	9, 9	111, 111	80	220
P10CUI-241212ZLF	24	12	101	12, 12	83, 83	82	220
P10CUI-241515ZLF	24	12	98	15, 15	67, 67	85	220

If you need other specifications, please enquire.

* For optional 3kV DC I/O Isolation, please add “H30” before LF!
 → Example: P10CUI-050505ZH30LF for 3kV

Package / Pinning / Derating



PIN CONNECTIONS	
#	DUAL SEP.
1	+Vin
2	- Vin
4	+V1out
5	- V1out
6	+V2out
7	- V2out

Same Pinning for 3kV Models!

App Notes:

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

² = 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.