P10CUI-xxxxZ(H30)LF

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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 ±3% maximum, input range of ±10% tolerance and low output ripple and noise.

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

Input Specifications	
Voltage Range	± 10%
Input Filter	Capacitor
Input Reflected Ripple Current[1]	20 mA pk-pk
Output Specifications	
Voltage Accuracy	± 3%
Short Circuit Protection	Short Term
Line Regulation	± 1.2% / 1% Vin Change
Load Regulation (20% - 100%)	± 10% (3.3 Vout Models: ± 20%)
Ripple and Noise (20Mhz bandwidth)	75 mV pk-pk
Temperature Coefficient	± 0.02% / ℃
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℃ (ambient)
Maximum Case Temperature	100℃
Storage Temperature	-40 to +125℃
Cooling	Free Air Convection (10 mm distance required)
RoHS Conform	Soldering 260℃, max. (1.5 mm from case 10s.)

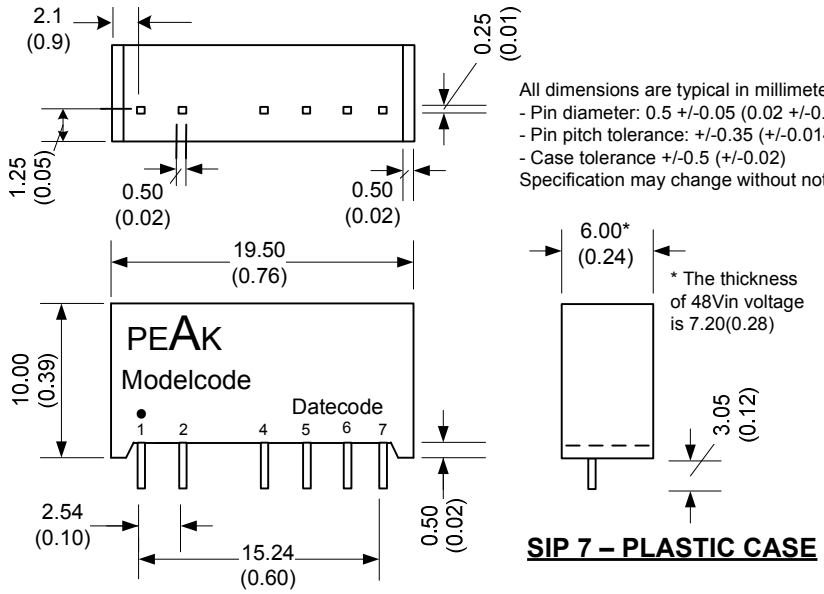
Selection Guide
Dual Separate Output

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 (uF)[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-050505Z<u>H30</u>LF for 3kV

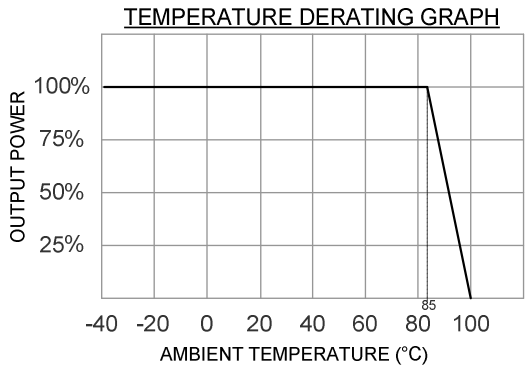
Package / Pinning / Derating



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

Specification may change without notice.

SIP 7 – PLASTIC CASE



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.