PEAK electronics
THE WORLD OF DC/DC-CONVERTERS
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P6CUI-xxxxZ(H30)LF (SIP7)
P6DUI–xxxxZ(H30)LF (DIP14)

PM1-SERIES **Rev. 07-2015**

- ✓ 1 Watt
- ✓ Unregulated
- ✓ **Dual Separate** Output
- ✓ **SIP7** or **DIP14** Case
- ✓ **1-3 kV** DC I/O Isolation
- ✓ Low Ripple and Noise

The PM1 series is a family of cost effective 0.5 – 1W single/dual output DC/DC converters. They are encapsulated in an ultra miniature SIP7 (PxCU/LU…) or DIP14 (PxDU/MU…) case. High performance features: 1000-6000Vdc input/output isolation, high efficiency operation, output voltage accuracy of ±3% maximum, input range of ±10% and low output ripple and noise.

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

Input Specifications

Voltage Range	±10%
Current max.	50 – 266mA (See table)
Current No-Load	8 – 25mA (See table)
Filter	Capacitors
Reflected Ripple Current (@12uH)	20mA pk-pk

General Specifications

Efficiency	57% - 82% (See table)
Isolation I/O (60 sec)	1000VDC (P6CUI/DUI-xxxxELF) 3000VDC (P6CUI/DUI-xxxxEH30LF)
Isolation I/O Capacitance	60 pF
Isolation I/O Resistance	1000 MΩ
Switching Frequency	80 kHz (variable)
Humidity (rel.)	95%
MTBF (Calculated MIL-HDBK-217F)	>1.121 Mhrs
Safety Standard (designed to meet)	IEC 60950-1

Output Specifications

Voltage accuracy	±3%
Line regulation (per 1% Vin change)	±1.2%
Load regulation (20% to 100%)	±10%,max. (for 3.3Vout) ±20%,max.
Ripple & noise (20 MHz bandwidth)	75 mV pk-pk
Temperature coefficient	±0.02%/°C
Capacitor load (Test: min. Vin + const. load)	100uF

Environment / Physical Specifications

Operation Temp. (Derating)	-40°C to 85°C
Case max.	100°C
Storage	-40°C to 125°C
Cooling	Nature / Free Air
Case Material	Plastic (UL94V-0 rated)
Potting	Epoxy (UL94V-0 rated)
Pin Material	Alloy42 (Solder coated)
Weight	2.3 g (SIP7) 2.6 g (DIP14)

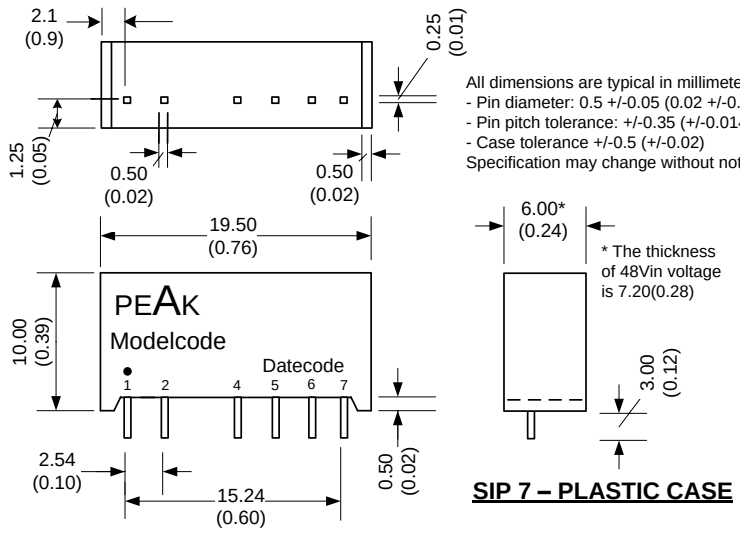
Order #	Input Voltage (VDC)	Input Current No Load (mA)	Input Current Full Load (mA)	Output Voltage (VDC)	Output Current Full Load (mA)	Efficiency (%)
DUAL SEPARATE OUTPUT						
P6CUI/DUI-05053R3ZLF	5	25	259	5, 3.3	100, 152	77
P6CUI/DUI-05057R2ZLF	5	25	266	5, 7.2	100, 69	75
P6CUI/DUI-050509ZLF	5	25	259	5, 9	100, 56	77
P6CUI/DUI-050512ZLF	5	25	259	5, 12	100, 42	77
P6CUI/DUI-050515ZLF	5	25	256	5, 15	100, 33	78
P6CUI/DUI-057R218ZLF	5	24	251	7.2, 18	100, 10	74
P6CUI/DUI-12053R3ZLF	12	15	106	5, 3.3	100, 152	78
P6CUI/DUI-12057R2ZLF	12	15	111	5, 7.2	100, 69	75
P6CUI/DUI-120509ZLF	12	15	108	5, 9	100, 56	77
P6CUI/DUI-120512ZLF	12	15	92	5, 12	100, 42	80
P6CUI/DUI-120515ZLF	12	15	106	5, 15	100, 33	78
P6CUI/DUI-24053R3ZLF	24	8	55	5, 3.3	100, 152	75
P6CUI/DUI-24057R2ZLF	24	8	55	5, 7.2	100, 69	75
P6CUI/DUI-240509ZLF	24	8	54	5, 9	100, 56	77
P6CUI/DUI-240512ZLF	24	8	53	5, 12	100, 42	78
P6CUI/DUI-240515ZLF	24	8	53	5, 15	100, 33	78
P6CUI/DUI-050505ZLF	5	25	266	5, 5	100, 100	75
P6CUI/DUI-057R27R2ZLF	5	25	259	7.2, 7.2	69, 69	77
P6CUI/DUI-050909ZLF	5	25	253	9, 9	56, 56	79
P6CUI/DUI-051212ZLF	5	25	250	12, 12	42, 42	80
P6CUI/DUI-051515ZLF	5	25	243	15, 15	33, 33	82
P6CUI/DUI-120505ZLF	12	15	111	5, 5	100, 100	75
P6CUI/DUI-127R27R2ZLF	12	15	108	7.2, 7.2	69, 69	77
P6CUI/DUI-120909ZLF	12	15	108	9, 9	56, 56	77
P6CUI/DUI-121212ZLF	12	15	104	12, 12	42, 42	80
P6CUI/DUI-121515ZLF	12	15	102	15, 15	33, 33	81
P6CUI/DUI-240505ZLF	24	8	55	5, 5	100, 100	75
P6CUI/DUI-247R27R2ZLF	24	8	54	7.2, 7.2	69, 69	77
P6CUI/DUI-240909ZLF	24	8	52	9, 9	56, 56	79
P6CUI/DUI-241212ZLF	24	8	50	12, 12	42, 42	82
P6CUI/DUI-241515ZLF	24	8	50	15, 15	33, 33	82

If you need other specifications, please enquire.

How to Order:

Standard **1kV** Isolation **SIP** Case	P6**C**UI-xxxxZLF
Standard **1kV** Isolation **DIP** Case	P6**D**UI-xxxxZLF
Optional **3kV** Isolation **SIP** Case	P6**C**UI-xxxxZ**H30**LF
Optional **3kV** Isolation **DIP** Case	P6**D**UI-xxxxZ**H30**LF

Package / Pinning / Derating

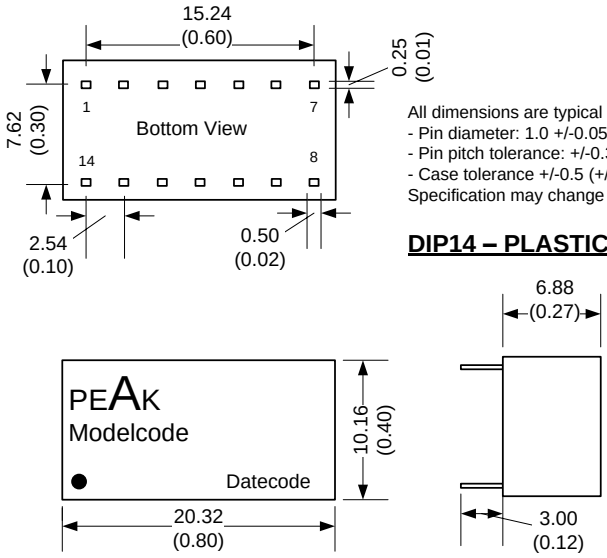


All dimensions are typical in millimeters (inches).
- Pin diameter: 0.5 +/-0.05 (0.02 +/-0.002)
- Pin pitch tolerance: +/-0.35 (+/-0.014)
- Case tolerance +/-0.5 (+/-0.02)

Specification may change without notice.

SIP 7 – PLASTIC CASE

PIN CONNECTIONS	
Model	P6CUI (SIP7)
#	**DUAL Sep.**
1	+Vin
2	-Vin
4	+V1out
5	-V1out
6	+V2out
7	-V2out

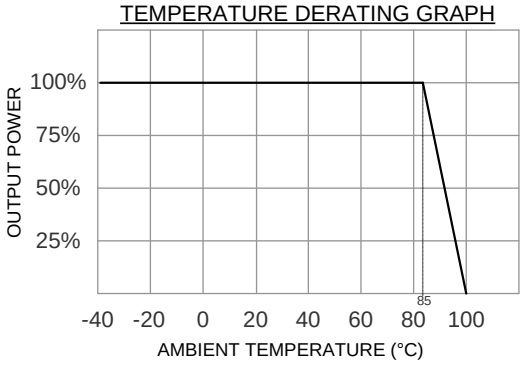


All dimensions are typical in millimeters (inches).
- Pin diameter: 1.0 +/-0.05 (0.04 +/-0.002)
- Pin pitch tolerance: +/-0.35 (+/-0.014)
- Case tolerance +/-0.5 (+/-0.02)

Specification may change without notice.

DIP14 – PLASTIC CASE

PIN CONNECTIONS	
Model	P6DUI (DIP14)
#	**DUAL Sep.**
1	-Vin
7	NC
8	-V2out
9	+V2out
10	-V1out
11	+V1out
14	+Vin
others	no Pin



App Notes:

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