

PECO5-x-xxxxE/Z2:1(H35)(M)LF



PECO-SERIES

Rev.02-2010

- ✓ 5 Watt
- ✓ 2:1 Wide Input
- ✓ Reg. Single and Dual Output
- ✓ 1.5 – 3.5 kV DC I/O Isolation
- ✓ DIP24 Plastic or Metal Case
- ✓ Continuous Short Circuit Prot.
- ✓ Full SMD Technology

The PECO-Line combine 1.5W up to 6W output power with 2:1 or 4:1 wide input and regulated output. The converters are available in plastic or optional metal DIP24 case with standard 1.5kV Isolation or optional 3.5kV isolation. You can choose between 3 Pinnings.

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

Input Specifications

Voltage Range	2:1 Wide Input
Input Filter	Pi Type
Input Reflected Ripple Current ¹	35 mA pk-pk

Output Specifications

Voltage Accuracy	± 1%
Short Circuit Protection	Continuous (automatic recovery)
Line Regulation	± 0.5%
Load Regulation	± 0.5%
Ripple and Noise (20Mhz bandwidth)	60 mV pk-pk
Temperature Coefficient	± 0.02% / °C

General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	1500 VDC 3500 VDC (optional - please add "H35")
I/O Isolation Capacity	60 pF, typ.
I/O Isolation Resistance	1000 M Ohm
Switching Frequency (typical)	100 - 400 kHz
Humidity	95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)	> 2.199 Mhrs

Physical Specifications

Case Material	Non Conductive Black Plastic (UL94V-0 rated) <i>Nickel Coated Copper</i> (optional – please add "M")
Potting Material	Epoxy (UL94V-0 rated)
Weight	~12.5g, typ. (Plastic case - standard) ~15g, typ. (Metal case - optional)

Environment Specifications

Operating Temperature	-25 to +71 °C (for 100% load)
Maximum Case Temperature	100 °C
Storage Temperature	-40 to +125 °C
Cooling	Free Air Convection (10mm distance required)
RoHS Conform	Soldering 260 °C, max. (1.5mm from case 10s.)

PECO-Series – PECO5-x-xxxxE/Z2:1(H35)(M)LF – Single/Dual Output – DIP24 – Plastic/Metal Case
Specification can change without a notice – We accept no liability for any inaccuracy or printing errors.

Selection Guide

Single/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								
PECO5-x-1205E2:1LF	9-18	20	555	5	250	1000	75	2200
PECO5-x-1209E2:1LF	9-18	20	534	9	138.8	555	78	470
PECO5-x-1212E2:1LF	9-18	20	514	12	104.3	417	81	470
PECO5-x-1215E2:1LF	9-18	20	520	15	83.3	333	80	470
PECO5-x-1224E2:1LF	9-18	20	520	24	52	208	80	220
PECO5-x-2405E2:1LF	18-36	12	267	5	250	1000	78	2200
PECO5-x-2409E2:1LF	18-36	12	260	9	138.8	555	80	470
PECO5-x-2412E2:1LF	18-36	12	254	12	104.3	417	82	470
PECO5-x-2415E2:1LF	18-36	12	254	15	83.3	333	82	470
PECO5-x-2424E2:1LF	18-36	12	254	24	52	208	82	220
PECO5-x-4805E2:1LF	36-72	8	135	5	250	1000	77	2200
PECO5-x-4809E2:1LF	36-72	8	131	9	138.8	555	79	470
PECO5-x-4812E2:1LF	36-72	8	130	12	104.3	417	80	470
PECO5-x-4815E2:1LF	36-72	8	130	15	83.3	333	80	470
PECO5-x-4824E2:1LF	36-72	8	130	24	52	208	80	220

DUAL OUTPUT								
PECO5-x-1205Z2:1LF	9-18	20	541	± 5	± 125	± 500	77	± 1000
PECO5-x-1209Z2:1LF	9-18	20	520	± 9	± 69.5	± 278	80	± 220
PECO5-x-1212Z2:1LF	9-18	20	520	± 12	± 52	± 208	80	± 220
PECO5-x-1215Z2:1LF	9-18	20	520	± 15	± 41.8	± 167	80	± 220
PECO5-x-1224Z2:1LF	9-18	20	520	± 24	± 26	± 104	80	± 100
PECO5-x-2405Z2:1LF	18-36	12	267	± 5	± 125	± 500	78	± 1000
PECO5-x-2409Z2:1LF	18-36	12	260	± 9	± 69.5	± 278	80	± 220
PECO5-x-2412Z2:1LF	18-36	12	260	± 12	± 52	± 208	80	± 220
PECO5-x-2415Z2:1LF	18-36	12	260	± 15	± 41.8	± 167	80	± 220
PECO5-x-2424Z2:1LF	18-36	12	260	± 24	± 26	± 104	80	± 100
PECO5-x-4805Z2:1LF	36-72	8	131	± 5	± 125	± 500	79	± 1000
PECO5-x-4809Z2:1LF	36-72	8	131	± 9	± 69.5	± 278	79	± 220
PECO5-x-4812Z2:1LF	36-72	8	130	± 12	± 52	± 208	80	± 220
PECO5-x-4815Z2:1LF	36-72	8	130	± 15	± 41.8	± 167	80	± 220
PECO5-x-4824Z2:1LF	36-72	8	130	± 24	± 26	± 104	80	± 100

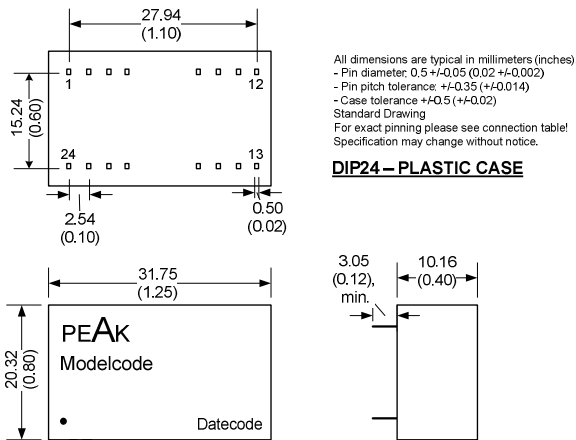
If you need other specifications, please enquire.

***OPTIONS:**

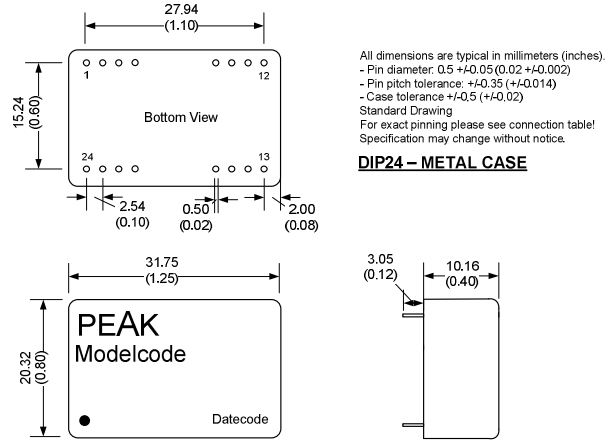
PINNING "A" / "B" / "C"	Please see table on page 3 and choose your pinning. <i>(PECO5-A-2412E2:1LF for Pinning "A")</i>
3.5 kV I/O Isolation	For optional 3.5kV DC I/O Isolation, please add "H35" before (M)LF! <i>(PECO5-A-2412E2:1H35LF)</i>
Metal case	For optional Metal case, please add "M" before LF! <i>(PECO5-A-2412E2:1H35MLF)</i>

Package / Pinning / Derating

Standard



Optional: Please add „M“ before LF



PINNING "A"		
#	Single	Dual
2	- Vin	- Vin
3	- Vin	- Vin
9	Omitted	Common
11	N.C.	- Vout
14	+ Vout	+Vout
16	- Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin

Same pinning for 3.5kV models!

PINNING "B"		
#	Single 1.5kV	Dual 1.5kV
1	+Vin	+Vin
2	N.C.	- Vout
3	N.C.	Common
9	Omitted	Omitted
10	- Vout	Common
11	+Vout	+Vout
12	- Vin	- Vin
13	- Vin	- Vin
14	+Vout	+Vout
15	- Vout	Common
16	Omitted	Omitted
22	N.C.	Common
23	N.C.	- Vout
24	+Vin	+Vin

Only 1.5 kV isolation for pinning "B" available!

PINNING "C"		
#	Single	Dual
1	+Vin	+Vin
2	+Vin	+Vin
10	N.C.	Common
11	N.C.	Common
12	- Vout	N.C.
13	+Vout	- Vout
15	N.C.	+Vout
23	- Vin	- Vin
24	- Vin	- Vin

Same pinning for 3.5kV models!

App Notes:

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

² = Tested by nominal Vin and constant resistor load.

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

Example: Pinning "C", single output, metal case

PECO	5	- C -	12	05	E	2:1	M	LF
Series	5 Watt	Pinning "C"	Input voltage	Output voltage	single output	2:1 wide input	Metal case	RoHS

Example: Pinning "A", dual output, plastic case, 3.5kV isolation

PECO	5	- A -	24	12	Z	2:1	H35	LF
Series	5 Watt	Pinning "A"	Input voltage	Output voltage	dual output	2:1 wide input	3.5kV isolation	RoHS

TEMPERATURE DERATING GRAPH

