

# P26TG-xxxxE/Z2:1(H35)LF



## PMD-SERIES

Rev.11-2008

- ✓ 6 Watt
- ✓ Regulated
- ✓ **SINGLE** and **DUAL** Output
- ✓ **1.5 to 3.5 kV DC** I/O Isolation
- ✓ **DIP24** Case
- ✓ Continuous Short Circuit Prot.
- ✓ Full SMD Technology

The PMD 6W series P26TG-xxxxE/Z2:1(H35)LF is a family of cost effective 6W single & dual output DC-DC converters. These converters are encapsulated in miniature DIP24 plastic case. High performance features: 1500VDC up to 3500VDC input/output isolation, continuous short circuit protection with automatic restart and tight line / load regulation, high efficiency operation, output voltage accuracy of  $\pm 1\%$  maximum. and a wide input of 2:1

All specifications typical at  $T_a=25^\circ\text{C}$ , 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 <sup>1</sup>	35 mA pk-pk

### Output Specifications

Voltage Accuracy	$\pm 1\%$
Short Circuit Protection	Indefinite (automatic recovery)
Line Regulation	$\pm 0.5\%$
Load Regulation	$\pm 0.5\%$ (3.3 / $\pm 3.3V_{out}$ Models: $\pm 1.5\%$ )
Ripple and Noise (20Mhz bandwidth)	60 mV pk-pk
Temperature Coefficient	$\pm 0.02\% / ^\circ\text{C}$

### General Specifications

Efficiency	See Table
I/O Isolation Voltage (3 sec.)	1500 VDC (3500 VDC optional)*
I/O Isolation Capacity	470 pF, typ.
I/O Isolation Resistance	1000 MOhm
Switching Frequency (typical)	266 kHz
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	~ 13.5g, 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

## 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 ( $\mu\text{F}^2$ )
<b>SINGLE OUTPUT</b>								
P26TG-123R3E2:1LF	9-18	30	527	3.3	0	1400	73	1000
P26TG-1205E2:1LF	9-18	30	649	5	0	1200	77	1000
P26TG-1209E2:1LF	9-18	30	641	9	0	666	78	680
P26TG-1212E2:1LF	9-18	30	617	12	0	500	81	330
P26TG-1215E2:1LF	9-18	30	625	15	0	400	80	220
P26TG-1224E2:1LF	9-18	30	625	24	0	250	80	68
P26TG-243R3E2:1LF	18-36	20	256	3.3	0	1400	75	1000
P26TG-2405E2:1LF	18-36	20	313	5	0	1200	80	1000
P26TG-2409E2:1LF	18-36	20	304	9	0	666	82	680
P26TG-2412E2:1LF	18-36	20	313	12	0	500	80	330
P26TG-2415E2:1LF	18-36	20	304	15	0	400	82	220
P26TG-2424E2:1LF	18-36	20	305	24	0	250	82	68
P26TG-483R3E2:1LF	36-72	12	128	3.3	0	1400	75	1000
P26TG-4805E2:1LF	36-72	12	156	5	0	1200	80	1000
P26TG-4809E2:1LF	36-72	12	152	9	0	666	82	680
P26TG-4812E2:1LF	36-72	12	156	12	0	500	80	330
P26TG-4815E2:1LF	36-72	12	151	15	0	400	83	220
P26TG-4824E2:1LF	36-72	12	151	24	0	250	83	68

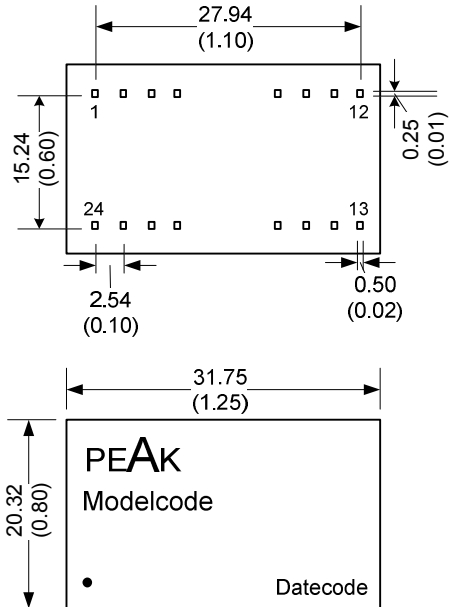
<b>DUAL OUTPUT</b>								
P26TG-123R3Z2:1LF	9-18	30	527	± 3.3	0	± 909	73	± 680
P26TG-1205Z2:1LF	9-18	30	649	± 5	0	± 600	77	± 330
P26TG-1209Z2:1LF	9-18	30	625	± 9	0	± 333	80	± 220
P26TG-1212Z2:1LF	9-18	30	625	± 12	0	± 250	80	± 100
P26TG-1215Z2:1LF	9-18	30	632	± 15	0	± 200	79	± 47
P26TG-1224Z2:1LF	9-18	30	625	± 24	0	± 125	80	± 33
P26TG-243R3Z2:1LF	18-36	20	333	± 3.3	0	± 909	75	± 680
P26TG-2405Z2:1LF	18-36	20	321	± 5	0	± 600	78	± 330
P26TG-2409Z2:1LF	18-36	20	301	± 9	0	± 333	83	± 220
P26TG-2412Z2:1LF	18-36	20	312	± 12	0	± 250	80	± 100
P26TG-2415Z2:1LF	18-36	20	312	± 15	0	± 200	80	± 47
P26TG-2424Z2:1LF	18-36	20	312	± 24	0	± 125	80	± 33
P26TG-483R3Z2:1LF	36-72	12	171	± 3.3	0	± 909	73	± 680
P26TG-4805Z2:1LF	36-72	12	158	± 5	0	± 600	79	± 330
P26TG-4809Z2:1LF	36-72	12	158	± 9	0	± 333	79	± 220
P26TG-4812Z2:1LF	36-72	12	156	± 12	0	± 250	80	± 100
P26TG-4815Z2:1LF	36-72	12	156	± 15	0	± 200	80	± 47
P26TG-4824Z2:1LF	36-72	12	156	± 24	0	± 125	80	± 33

If you need other specifications, please enquire.

**\* For optional 3.5kV DC I/O Isolation, please add “H35” before LF!**

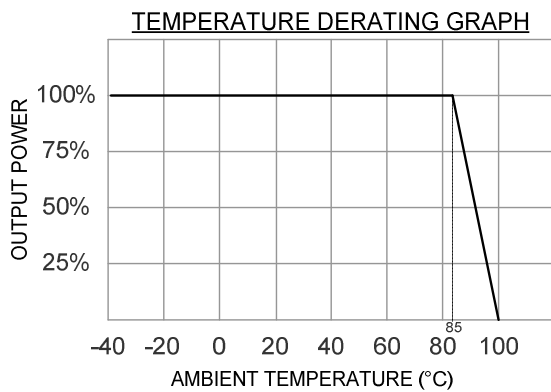
→ Example: P26TG-1205Z2:1H35LF for 3.5kV

# 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.

## DIP24 – PLASTIC CASE



PIN CONNECTIONS		
#	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
others	Omitted	Omitted

Same Pinning for 3.5kV Isolation

### App Notes:

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

<sup>2</sup> = Tested by nominal Vin and constant resistor load.