

P34TG-xxxxE/Z2:1MLF



PMD-SERIES

Rev.11-2008

- ✓ 8 Watt
- ✓ Regulated
- ✓ **Single** and **Dual** Output
- ✓ **1.5 kV** DC I/O Isolation
- ✓ **DIP24 Metal** Case
- ✓ Continuous Short Circuit Prot.
- ✓ Full SMD Technology

The PMD 8W series P34TG-xxxxE/Z2:1MLF is a family of cost effective 8W single & dual output DC-DC converters. These converters are encapsulated in miniature DIP24 metal case. High performance features: 1500VDC 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 ¹	35 mA pk-pk

Output Specifications

Voltage Accuracy	$\pm 1\%$
Short Circuit Protection	Indefinite (automatic recovery)
Line Regulation	$\pm 0.5\%$
Load Regulation ($I_o = 10 - 100\%$)	$\pm 0.5\%$ (3.3 Vout Models: $\pm 0.7\%$)
Cross Regulation ³ (Dual Output)	$\pm 5\%$
Over Current Protection	150% of FL, typ.
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.)	1500 VDC
I/O Isolation Capacity	1000 pF, typ.
I/O Isolation Resistance	1000 MOhm
Switching Frequency (typical)	330 kHz
Humidity	95% rel H
Reliability Calculated MTBF (MIL-HDBK-217F)	> 0.91 Mhrs

Physical Specifications

Case Material	Nickel Coated Copper
Potting Material	Epoxy (UL94V-0 rated)
Weight	~ 17.0g, typ.

Environment Specifications

Operating Temperature	-40 to +60 °C (ambient)
Maximum Case Temperature	100 °C
Storage Temperature	-40 to +125 °C
Cooling	Free Air Convection
RoHS Conform	Soldering 260 °C, max. (1.5mm from case 10s.)

Selection Guide

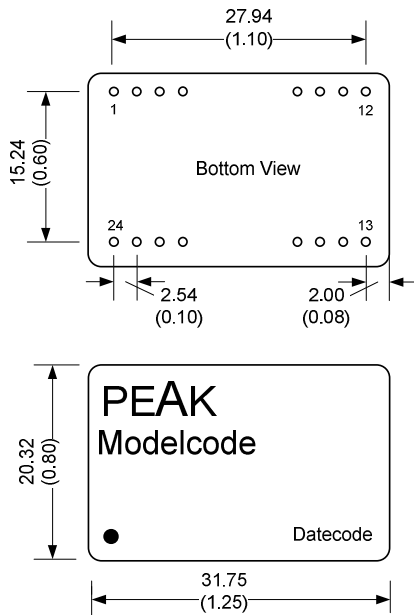
Single/Dual Output

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 ² (uF)
SINGLE OUTPUT								
P34TG-123R3E2:1MLF	9-18	20	687	3.3	0	2000	80	3300
P34TG-1205E2:1MLF	9-18	20	762	5	0	1500	82	2200
P34TG-1212E2:1MLF	9-18	20	784	12	0	665	85	470
P34TG-1215E2:1MLF	9-18	20	803	15	0	535	83	220
P34TG-243R3E2:1MLF	18-36	15	344	3.3	0	2000	80	3300
P34TG-2405E2:1MLF	18-36	15	381	5	0	1500	82	2200
P34TG-2412E2:1MLF	18-36	15	392	12	0	665	85	470
P34TG-2415E2:1MLF	18-36	15	397	15	0	535	84	220
P34TG-483R3E2:1MLF	36-72	15	172	3.3	0	2000	80	3300
P34TG-4805E2:1MLF	36-72	15	191	5	0	1500	82	2200
P34TG-4812E2:1MLF	36-72	15	198	12	0	665	84	470
P34TG-4815E2:1MLF	36-72	15	198	15	0	535	84	220
DUAL OUTPUT								
P34TG-1205Z2:1MLF	9-18	20	813	± 5	0	± 800	82	± 1000
P34TG-1212Z2:1MLF	9-18	20	794	± 12	0	± 335	84	± 220
P34TG-1215Z2:1MLF	9-18	20	794	± 15	0	± 265	84	± 100
P34TG-2405Z2:1MLF	18-36	15	407	± 5	0	± 800	82	± 1000
P34TG-2412Z2:1MLF	18-36	15	402	± 12	0	± 335	83	± 220
P34TG-2415Z2:1MLF	18-36	15	392	± 15	0	± 265	85	± 100
P34TG-4805Z2:1MLF	36-72	15	203	± 5	0	± 800	82	± 1000
P34TG-4812Z2:1MLF	36-72	15	196	± 12	0	± 335	85	± 220
P34TG-4815Z2:1MLF	36-72	15	196	± 15	0	± 265	85	± 100

If you need other specifications, please enquire.

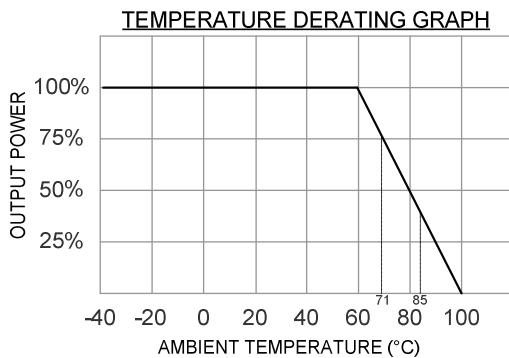
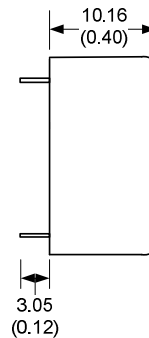
Notes:

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)
 Standard Drawing
 For exact pinning please see connection table!
 Specification may change without notice.

DIP24 – METAL 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

App Notes:

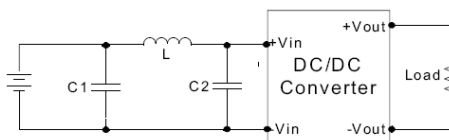
¹ = Measured Input reflected ripple current with a simulated source inductance of 12uH.

² = Tested by nominal Vin and constant resistor load.

³ = One load is 25% - 100%, the other load is 100%, the output voltage variable rate is within ± 5%

⁴ = Input filter components (C1,C2,L) are used to help meet conducted emissions requirement for the module. These components should be mounted as close as possible to the module; all leads should be minimized to decrease radiated noise.

⁵ = An external filter capacitor (e.g. Nippon - chemi - con KY series, 220uF/100V) is required if the module has to meet EN61000-4-4 and EN61000-4-5.



EMC SPECIFICATIONS		
Radiated Emissions	EN 55022	CLASS A
Conducted Emissions ⁴	EN55022	CLASS A
ESD	IEC 61000-4-2	Perf. Criteria B
RS	IEC 61000-4-3	Perf. Criteria A
EFT ⁵	IEC 61000-4-4	Perf. Criteria B
Surge ⁵	IEC 61000-4-5	Perf. Criteria B
CS	IEC 61000-4-6	Perf. Criteria A
PFMF	IEC 61000-4-8	Perf. Criteria A