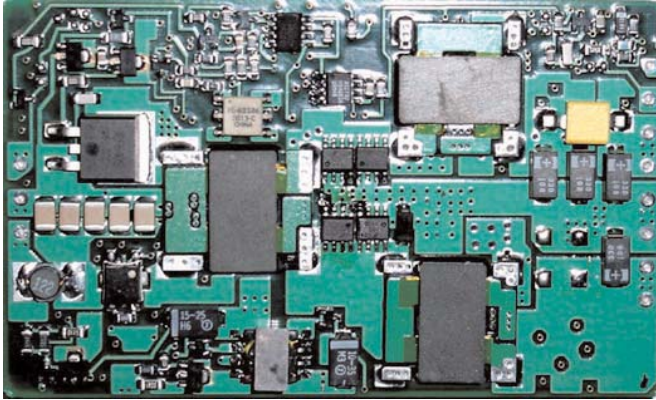


## TKD SERIES - 50 WATT, 3/4 BRICK



### DESCRIPTION

The TKD series of dual-output DC/DC converters provides high power and full isolation in a low cost, single-board design package. The TKD series provides highly reliable, onboard conversion of telecom and datacom input voltages to isolated low output voltages without the need for a heatsink. The TKD series is ideally suited for Distributed Power Architectures (DPA), telecommunications equipment, LAN/WAN, and data processing applications.

### FEATURES

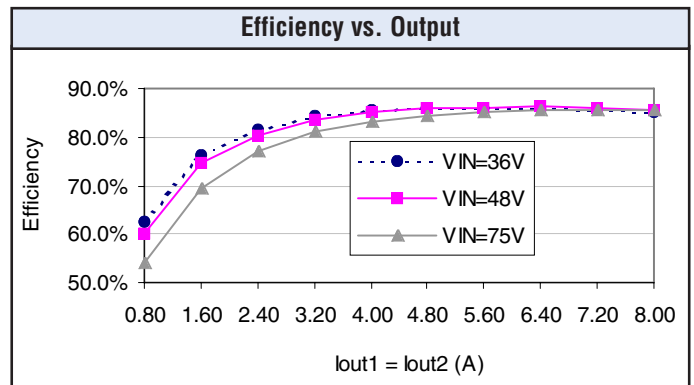
- Independent Dual Outputs
- Low Cost Package
- No Heatsink
- Single-Board Design
- Wide Trim Range for both Outputs
- 1500V Isolation
- Industry Standard Footprint
- Remote Shutdown
- Flexible Output Power

### TECHNICAL SPECIFICATIONS

Input		
Parameter	Maximum	Unit
Voltage Range		
48 nom.	36-75	VDC
Transient Voltage Withstand	100/100	V/ms
Turn-on Time	25	mS
Input Reflected Ripple Current	50	mA <sub>pk-pk</sub>
UVP Trip Range	34/30	V <sub>on</sub> /V <sub>off</sub>

Output		
Parameter	Maximum	Unit
Setpoint Accuracy	±1.5	% V <sub>out</sub>
Line Reg. V <sub>in</sub> min. – V <sub>in</sub> max., I <sub>out</sub> rated output 1	0.5	% V <sub>out</sub>
Load Reg. I <sub>out</sub> min. – I <sub>out</sub> max., V <sub>in</sub> rated output 1	0.5	% V <sub>out</sub>
Min. Output Current, each Output	1	A
Dynamic Reg., Loadstep		
Pk Deviation	4	% V <sub>out</sub>
Settling Time	500	µS
Voltage Trim Range		
Output 1	2.50-3.47	V
Output 2 if V <sub>out1</sub> set to 3.3V	1.50-2.50	V
Output 2 if V <sub>out1</sub> set to 2.5V	1.50-2.00	V
Power Limit Threshold Range	110-150	% P <sub>out rated</sub>
OVP Trip Range	115-140	% V <sub>out</sub>

Notes
Specifications typically at 25°C, nominal line, and full load unless otherwise stated.
Specifications subject to change without notice.



General		
Parameter	Maximum	Unit
Switching Frequency	200	KHz
Remote ON/OFF		
Positive	On>3.5/Off<1.8	V
Negative (optional)	On<1.8/Off>3.5	V
Isolation Input-Output	1500	VDC
Temp. Coefficient	0.03	%/°C
Board Temp		
Operating Range	-40 to +100	°C
Storage Range	-40 to +125	°C
Thermal Shutdown Range	105 to 115	°C
Humidity max, Non-Condensing	95	%
Safety	Pending	
Weight (approx)	1.5	Oz.

## TKD SERIES - 50 WATT, 3/4 BRICK

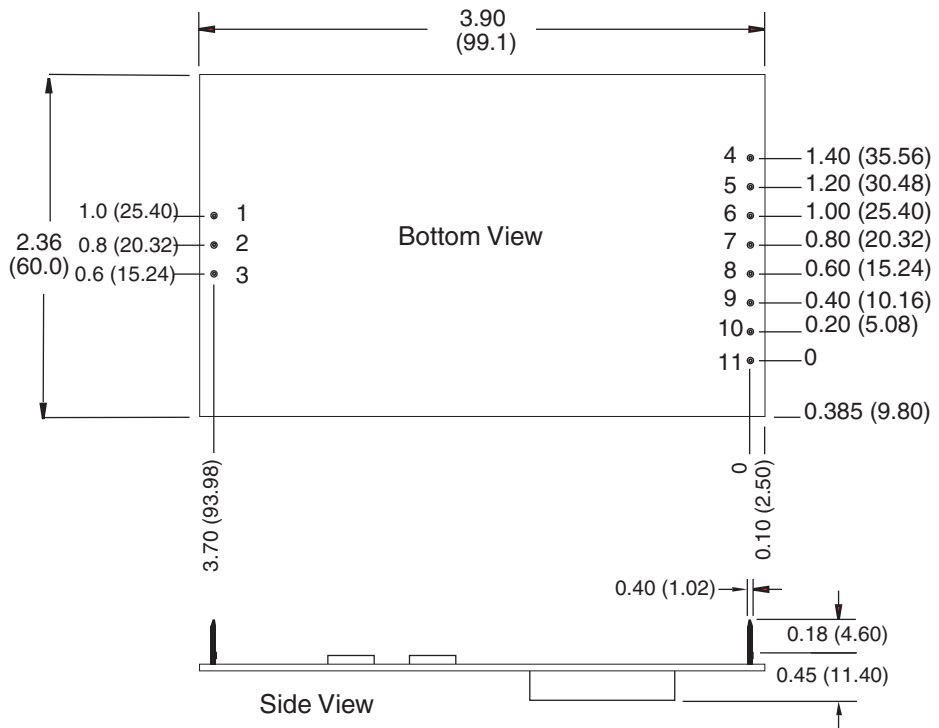
MODELS - (See the last page of section for options.)

MODEL	INPUT VOLTAGE (VOLTS)	INPUT VOLTAGE RANGE (VOLTS)	MAXIMUM INPUT CURRENT (AMPS)*	OUTPUT VOLTAGE (VOLTS)	RATED OUTPUT CURRENT (AMPS)**	RIPPLE & NOISE pk-pk (mV)	TYPICAL EFFICIENCY***
<b>TKD12ZED-T</b>	48	36-75	2.0	3.3/2.5	12/12	100/100	84%

- NOTES:**
- \* Maximum input current at minimum input voltage, maximum rated output power.
  - \*\* Maximum current on either output not to exceed  $I_{OUT}$  rated and total output power not to exceed 50 Watts.
  - \*\*\* At nominal  $V_{in}$ , output current equal to 8.0 Amps on either output.

### MECHANICAL DRAWING

PIN	Function
1	+Vin
2	-Vin
3	On/Off
4	+V <sub>out2</sub>
5	+V <sub>out2</sub>
6	Common
7	Common
8	+V <sub>out1</sub>
9	+V <sub>out1</sub>
10	Trim 2
11	Trim 1



Units: inches (mm)

## OPTIONS

When ordering equipment options, use the following suffix information. Select the option(s) that you prefer and add them to the model number. Example ordering options are located below the options table.

OPTION	SUFFIX	APPLICABLE SERIES	REMARKS
Negative Logic	N	HAS, HBD, HBS, HES, HLS, LES, QBS, QES, QLS, TES, TQD	TTL "Low" Turns Module ON TTL "High" Turns Module OFF
Lucent-Compatible Trim	T	HAS, HBD, HBS, HES, HLS, QBS, QES, QLS	
Terminal Strip	TS	XWS, XWD, XWT	
Trim	1	IAS, LES	
Enable	2	IAD, IAS, LES, SMS	
Trim and Enable	3	IAS, LES	
Current Share	4	SMS	
Headerless	Y	Encapsulated EWS, IWS, OWS	
<b>PIN LENGTH AND HEATSINK OPTIONS</b>			Standard Pin Length is 0.180" (4.6mm)
0.110" (2.8mm) Pin Length	8	All Units (Except SMS)	
0.150" (3.8mm) Pin Length	9	All Units (Except SMS)	
0.24" (6.1mm) Horizontal Heatsink	1H	All Units (Except DIP, HLS, HLD, QLS, SIP, SM, TLD, and TKD Packages)	Includes Thermal Pad
0.24" (6.1mm) Vertical Heatsink	1V	All Units (Except DIP, HLS, HLD, QLS, SIP, SM, TLD, and TKD Packages)	Includes Thermal Pad
0.45" (11.4mm) Horizontal Heatsink	2H	All Units (Except DIP, HLS, HLD, QLS, SIP, SM, TLD, and TKD Packages)	Includes Thermal Pad
0.45" (11.4mm) Vertical Heatsink	2V	All Units (Except DIP, HLS, HLD, QLS, SIP, SM, TLD, and TKD Packages)	Includes Thermal Pad
0.95" (24.1mm) Horizontal Heatsink	3H	All Units (Except DIP, HLS, HLD, QLS, SIP, SM, TLD, and TKD Packages)	Includes Thermal Pad
0.95" (24.1mm) Vertical Heatsink	3V	All Units (Except DIP, HLS, HLD, QLS, SIP, SM, TLD, and TKD Packages)	Includes Thermal Pad

Example Options:

HBS050ZG-ANT3V = HBS050ZG-A with negative logic, Lucent-compatible trim, and 0.95" vertical heatsink.

LES015YJ-3N = LES015YJ with optional trim and enable, negative logic.

QBS066ZG-AT8 = QBS066ZG-A with Lucent compatible trim and 0.110" pin length.

**NUCLEAR AND MEDICAL APPLICATIONS** Power-One products are not authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the President of Power-One, Inc.

**TECHNICAL REVISIONS** The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.

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