

Ideal Diode **MODULE**

TD-DIODE-1000 Technical Specification

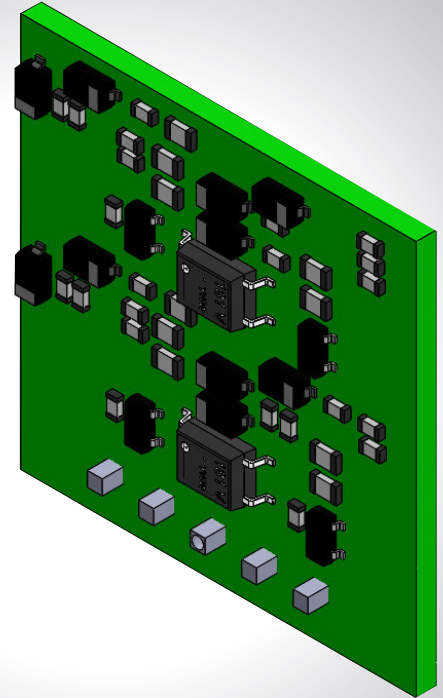
Up to 1000W AC-DC Full Bridge Rectifier

FEATURES

- Universal AC Input 85-265Vrms
- Low loss mosfet rectifier
- Low profile, small size
- Vertical or horizontal mount
- Conduction cooling

PRODUCT OVERVIEW

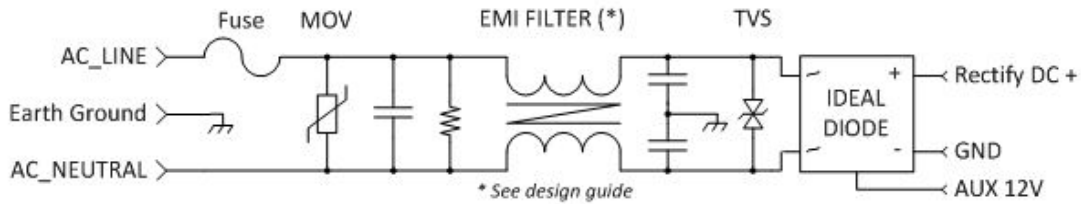
The Telcodium diode module provides a full wave rectified DC voltage output from a wide range of AC input source from 85V_{rm} to 265V_{rms}, with a very low lost compared to traditional diode bridge rectifiers. The ideal diode module uses a patented technology to take the AC source and fully rectifies the output. This module draws 10 times less power than a traditional diode bridge rectifier and doesn't need a heat sink or fan.



APPLICATIONS

- Power supply design front end
- Any DC full wave rectifier requirement up to 1000W, 265Vac rms
- High efficiency equipment design
- Convection cooling equipment

Figure 1.



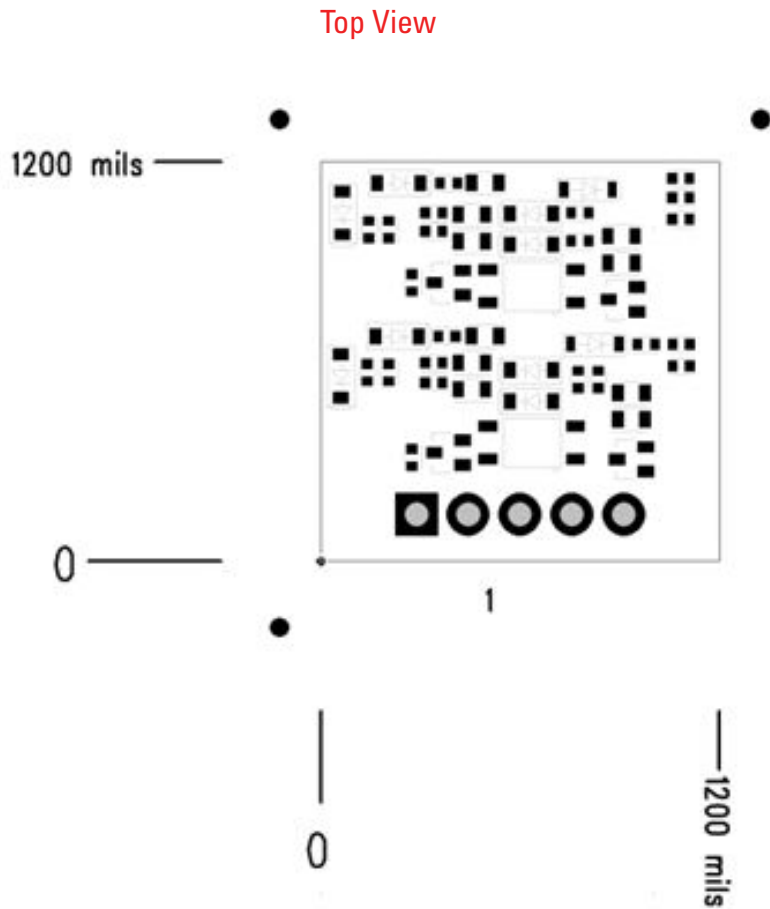
SPECIFICATIONS

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Absolute maximum Rating					
Operating temperature	-40.00	-	100.00	C	
Storage temperature	-45.00	-	125.00	C	
Humidity (non condensing)					
Operating	20.00	-	95.00	%	RH
Non-Operating	10.00	-	95.00	%	RH
Input characteristic (L to N)					
<i>Operating input voltage</i>					
AC input continuous	85.00	-	265.00	Vrms	
Operating input frequency	45.00	-	65.00	Hz	
Maximum input power	-	-	1000.00	W	Vin>85Vrms
Maximum input current	-	-	12.00	A	Vin=85Vrms
Aux input voltage	11.00	12.00	17.00	Vdc	
Aux input current	10.00	-	20.00	mA	
Reliability Characteristics					
Calculated MTBF (MIL-217) MIL-HDBK-217F	-	10.00	-	10 ⁶ HRS	
Standards Compliance UL 60950-1/R2011-12 CAN/CSA-C22.2 No. 60950-1/A1:2011 EN60950-1/A12:2011 CE marking					Tb=70C
Mechanical					
Size (WxHxL)					
Weight					

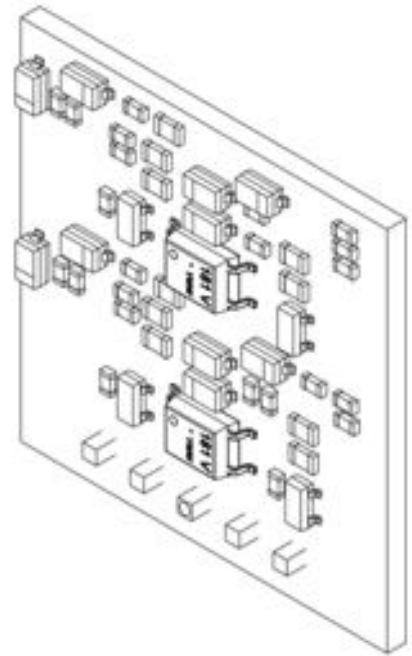
Table 1

OUTLINE DRAWING

Figure 2.

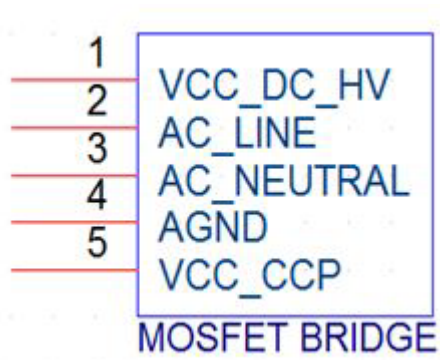


Isometric View



- ✓ See design guide PCB layout for proper clearance and trace width routing
- ✓ Connector TE 640385-5 , 0.156" (3.96mm)

Symbol



Top View Pinout

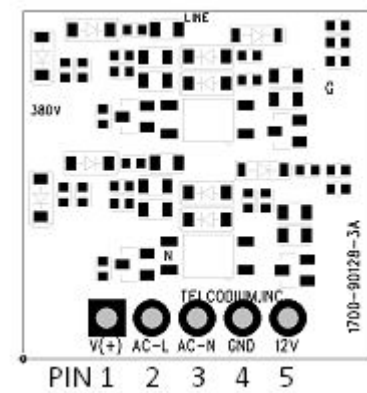


Figure 3.

ELECTRICAL CONNECTIONS

Pinout description

- Pin1: DC rectified output full wave rectified
- Pin2: AC line input
- Pin3: AC Neutral input
- Pin4: Ground none-isolated section
- Pin5: Auxiliary 12Vdc power source (20 mA max), see design guide

✓ See design guide for connections and AC input EMI FILTER design

RoHS COMPLIANCE

The EU led RoHS (Restriction of Hazardous Substances) Directive bans the use of Lead, Cadmium, Hexavalent Chromium, Mercury, Polybrominated Biphenyls (PBB), and Polybrominated Diphenyl Ether (PBDE) in Electrical and Electronic Equipment. Telcodium product is 6/6 RoHS compliant. For more information please refer to the Telcodium website RoHS addendum.



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