Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

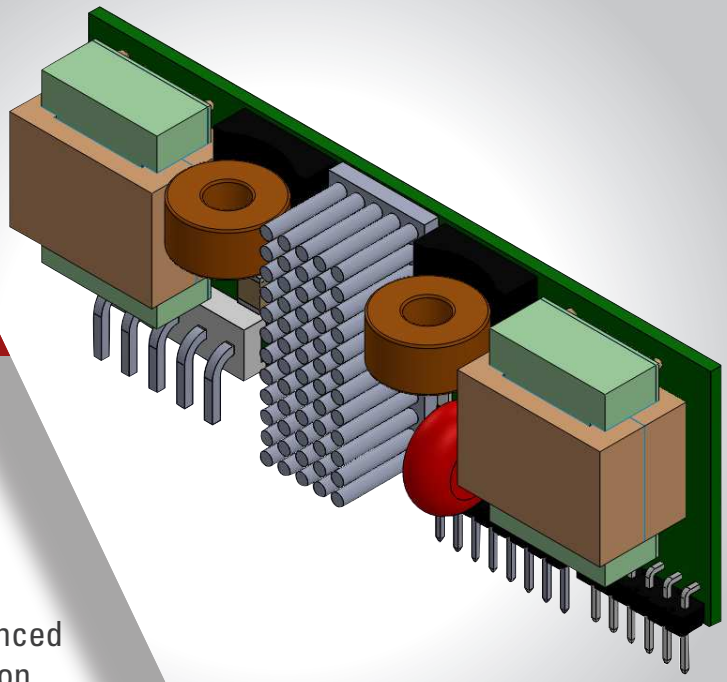
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

TELCODIUM
POWER SUPPLY TECHNOLOGY

Power Factor Corrector (PFC) MODULE

TD-PFC-500 Technical Specification

100 to 500W Power Module



FEATURES

- High-Efficiency
- Direct connection with ideal diode module
- Low profile, small size
- Low harmonic distortion
- High efficiency interleaved technology
- Vertical or horizontal mount

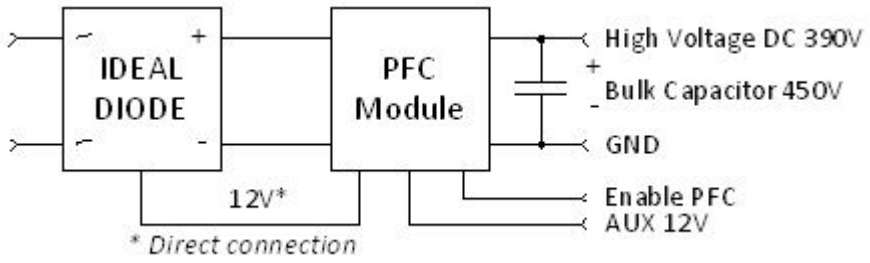
PRODUCT OVERVIEW

The Telcodium PFC module uses high efficiency interleaved technology with a fast switching mosfet for low loss and low emi integrated in a small form factor module. The Telcodium PFC module uses advanced switching technology to reduce the harmonic distortion under CISPR norm with greater efficiency from low line to high line input and across the load range.

APPLICATIONS

- Power supply design with high efficiency PFC boost
- High efficiency equipment design
- Convection cooling equipment

Figure 1.



SPECIFICATIONS

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Absolute maximum rating					
Operating temperature	-40	-	95	C	Limited by bulk capacitor
Storage temperature	-45	-	125	C	
Humidity (non condensing)					
Operating	20	-	95	%	RH
Non-Operating	10	-	95	%	RH
Input characteristic (L to N)					
Operating input voltage					
AC input continuous	85	-	265	Vrms	
Operating input frequency	45	-	65	Hz	
Power Factor of AC input line	-	0.99	-		See Graphic
Total Harmonic distortion of AC input current	-	3	-	%	See Graphic
Inrush of AC input current	-	-	50	A	
Maximum input power	-	-	500	W	Vin>85Vrms
Maximum input current	-	-	6	A	Vin=85Vrms
Aux input voltage	11.00	12.00	17.00	Vdc	
Aux input current	tbd	-	tbd	mA	
Thermal Shutdown	140.00	-	160.00	C	
Output characteristics					
Output voltage set point	380	390	400	Vdc	
Output voltage regulation					
Over line		Tbd	(+/-)0.3	%	
Over load		Tbd	(+/-)2	%	
Operating output current range	0	-	1.3	A	
Output over voltage shutdown threshold	420	-	460	Vdc	tbd
Output capacitor (bulk)	100	-	390	uf	Note1

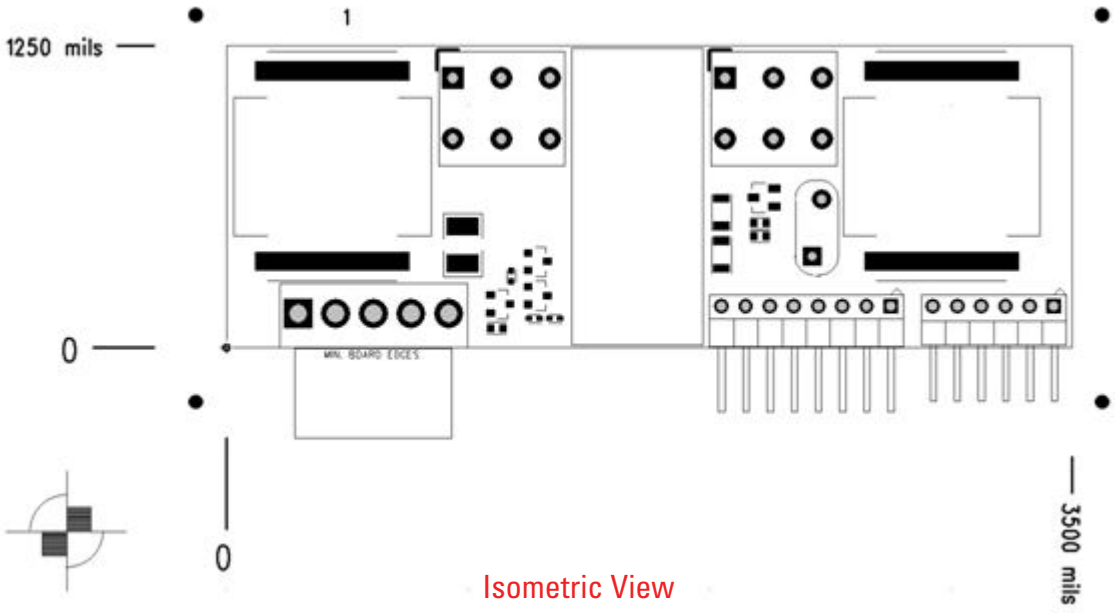
Efficiency					
50% load		96	-	%	See Graphic 1
100% load		97	-	%	See Graphic 1
Reliability Characteristics					
Calculated MTBF (MIL-217)				10^6	
MIL-HDBK-217F		10		HRS	Tb=70C
EMC					
With Ideal diode and EMC AC Filter					
	EN5501		EN5502		
Operating output current range	1		2	FCC Part 15	
Output over voltage shutdown threshold	EN61000-3-2				
Output capacitor (bulk)	EN61000-3-3				
Electrostatic discharge immunity	EN61000-4-2				
Radiated radio frequency immunity	EN61000-4-3				
Electrical Fast transients/burst	EN61000-4-4				
Line surge immunity	EN61000-4-5				
Conducted immunity	En61000-4-6				
Power Frequency mag field	EN61000-4-8				
Voltage dip immunity	EN61000-4-11				
Standards Compliance					
UL 60950-1/R2011-12					
CAN/CSA-C22.2 No. 60950-1/A1:2011					
EN60950-1/A12:2011					
CE marking					
Mechanical					
Size (WxHxL)	3.5x1.25x0.775			inch	
	88.9x31.75x20			mm	
Weight	75			g	
Note1	For 20mS hold time at 500W , min 330uf at 450Vdc				

Table 1

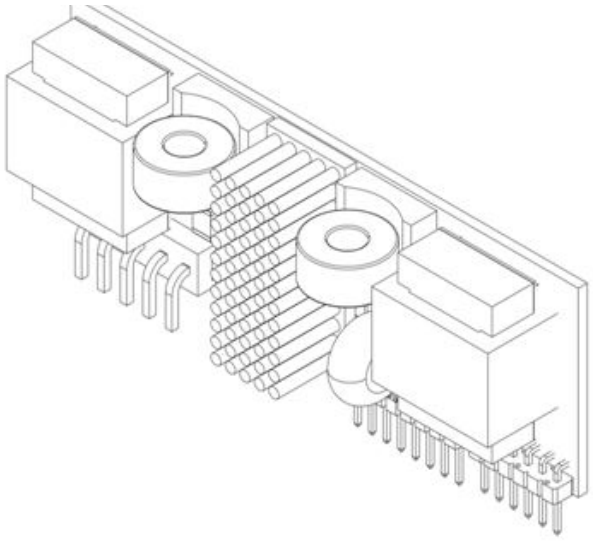
OUTLINE DRAWING

Figure 2.

Top View



Isometric View



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

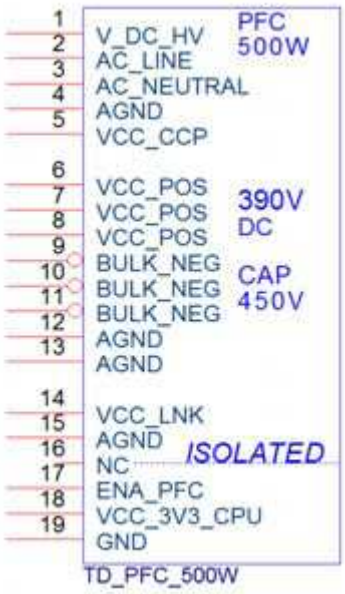
ELECTRICAL CONNECTIONS

Pinout description

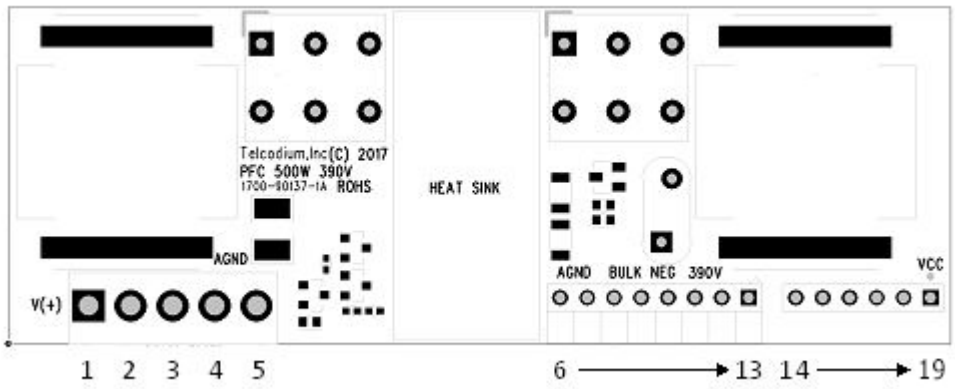
- Pin1: DC rectified input full wave rectified (from bridge)
- Pin2: AC line input
- Pin3: AC Neutral input
- Pin4: Ground non-isolated section
- Pin5: Auxiliary 12Vdc power source (100mA max), see design guide
- Pin6-8: Vout 390Vdc
- Pin9-11: External bulk capacitor (negative) connection
- P12-13,15: Ground non-isolated section
- P14: VCC 12-17vdc, input from local DC-DC
- P16: nc
- P17: ENABLE PFC (Active Low)
- P18: VCC 3V3, input pin from TD CPU Module or regulated 3.3V dc source 25mA
- P19: Isolated ground (Caution: do not connect with AGND)

✓ See design guide for connections

Symbol



Top View Pinout



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.

TELCODIUM
POWER SUPPLY TECHNOLOGY

HEADQUARTERS

TELCODIUM INC.
91 De la Barre,
Boucherville, Quebec
Canada J4B 2X6

Telephone: 1 450-274-6170
info@telcodium.com
www.telcodium.com

High-Efficiency Power Modules
AC Power Supplies
DC Power Supplies