

Product Brief: Veta™ iHD Series – Half Brick



Veta™ iHD Series DC/DC Power Modules 48V Input, 24V/12.5A Output Half Brick

Its **91 % efficiency** and superior thermal performance make the Veta™ Family of power modules ideally suited for power-hungry applications in demanding thermal environments. This rugged building block is designed to serve as the core of your high reliability system. A wide output voltage **trim range, -46 to +10%**, and remote sensing are standard features enhancing versatility. The Veta™ iHD platform also offers standard **active current sharing** for applications requiring N+1 or parallel operation.

Features

- Standard Half Brick footprint
- High efficiency, typical 91%
- Wide output trim voltage
- True 12.5A product at 24V output
- Industry-leading output power: 300W
- Monotonic start-up
- Starts with a pre-biased output
- Single wire active current sharing
- Basic insulation – 1500 Vdc
- Constant switching frequency
- Synchronization to an external clock signal
- Auto-recovery protection:
 - Input under and over voltage
 - Current limit
 - Short circuit
 - Thermal limit
- Latched output over voltage
- Optional auto-recovery output over voltage
- High reliability open frame, surface-mount construction
- Baseplate for improved thermal management
- Optional 0.110" pin length
- Safety agency approvals pending
- Multiple patents pending

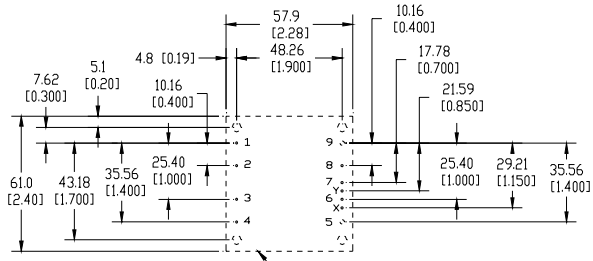
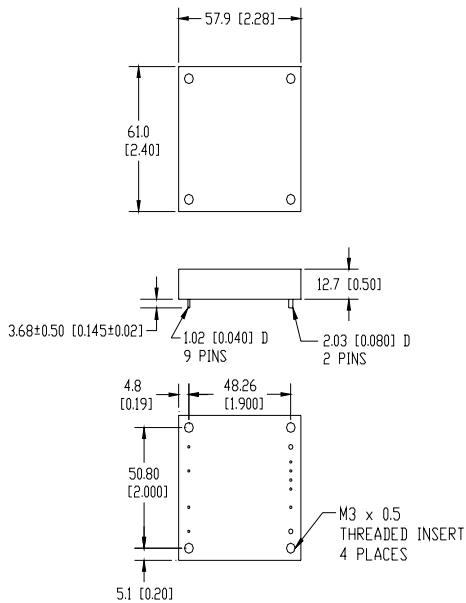
Base Product Code	Input Voltage	Output Voltage	Output Current	Efficiency
iHD48013A240V	36-75V	24V	12.5A	91%

Typical Performance

Input Characteristics		
Operating input range	36-75V	
Transient input voltage	100V	100mS max
Turn-on voltage	34V	
Turn-off voltage	32V	
Start-up time	80 mS	On/Off to 90% Vout
Maximum input current	10.2A	Input 0-75V, Io,max
Output Characteristics		
Output voltage tolerance	+/- 3% max	Over line, load, and temp to end of life
Efficiency	see product table	
Line regulation	10 mV	Over rated input
Load regulation	25 mV	Over rated load
Output voltage adjustment	54%-110%	%Vo,nom
Output ripple	250 mVp-p	20MHz bandwidth
Dynamic response	Load step 25% of Io,max slew rate =0.1A/us	
Transient voltage	600 mV	
Recovery time	350 uS	
Ripple frequency	300 kHz	Fixed
Protection		
Current limit inception	130% of Io,rated	
Short circuit	Continuous protection	Auto recovery (AR) hiccup
Output over voltage	120% of Vout,nom	Latch (AR-optional)
Thermal shutdown	120C	Auto recovery hiccup
Environmental		
Operating temperature	-40C to 120C	Measurement point in full datasheet



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Top view - Footprint

PIN	FUNCTION	PIN	FUNCTION
1	Vin (+)	7	Trim
2	On/Off	8	Sense (+)
3	Case (Ishare – optional)	9	Vout (+)
4	Vin (-)	x	Sync (Omit optional)
5	Vout (-)	y	Ishare (Omit optional)
6	Sense (-)		

Ordering Information

Product Identifier	Package Size	Platform	Input Voltage	Output Current/Power	Output Units	Main Output Voltage	# of Outputs	Safety Class	Feature Set
I	H	D	48	013	A	240	V	- 0	00
TDK Innoveta	Half Brick	Veta™	36-75V	13	Amps	240 – 24V	Single		00 – Standard

Feature Set	On/Off Logic	Load share pin3 Omit pin X and Y	Output OVP	Pin Length
00	Positive	No	Latching	0.145"
01	Negative	No	Latching	0.145"
02	Positive	Yes	Auto-Recovery	0.145"
03	Negative	Yes	Auto-Recovery	0.145"
04	Positive	No	Latching	0.110"
05	Negative	No	Latching	0.110"
06	Positive	Yes	Auto-Recovery	0.110"
07	Negative	Yes	Auto-Recovery	0.110"



3320 Matrix Drive Suite 100
Richardson, Texas 75082

Phone (877) 498-0099 Toll Free
(469) 916-4747
Fax (877) 498-0143 Toll Free
(214) 239-3101

support@tdkinnoveta.com
<http://www.tdkinnoveta.com/>

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