

Product Brief: Veta™ iHD Series – Half Brick

Veta™ iHD Series DC/DC Power Modules 48V Input, 60A Output Half Brick



Its **83.5% 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 83.5%
- Wide output trim voltage
- True 60A product at 1.2V output
- Industry-leading output power: 72W
- 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

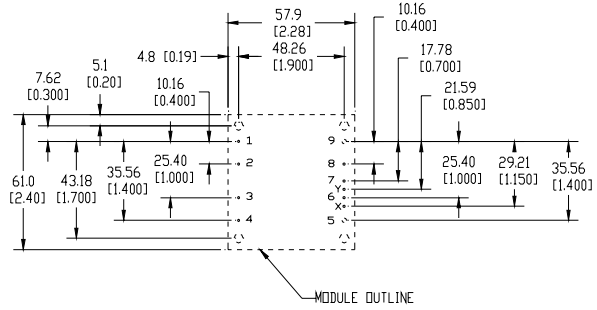
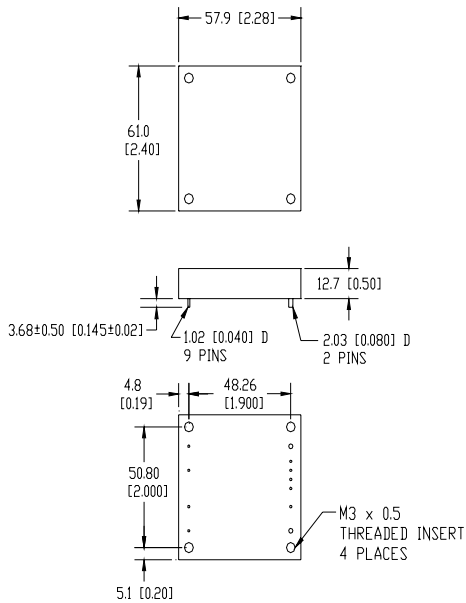
Base Product Code	Input Voltage	Output Voltage	Output Current	Efficiency
iHD48060A012V	36-75V	1.2V	60A	83.5%

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	2.6A	Input 0-75V, I _{o,max}
Output Characteristics		
Output voltage tolerance	+/- 3% max	Over line, load, and temp to end of life
Efficiency	see product table	Full load
Line regulation	2 mV	Over rated input
Load regulation	6 mV	Over rated load
Output voltage adjustment	54%-110%	%V _{o,nom}
Output ripple	50 mVp-p	20MHz bandwidth
Dynamic response		Load step 25% of I _{o,max} slew rate =0.1A/us
Transient voltage	100 mV	
Recovery time	350 uS	
Ripple frequency	240 kHz	Fixed
Protection		
Current limit inception	120% of I _{o,rated}	
Short circuit	Continuous protection	Auto recovery (AR) hiccup
Output over voltage	136% of V _{out,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	060	A	012	V	- 0	00
TDK Innoveta	Half Brick	Veta™	36-75V	60	Amps	012 – 1.2V	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"



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