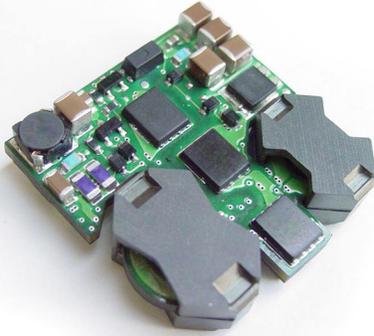


**Bellesta® iPB Series DC/DC Power Modules  
48V Input, 10A Output  
Surface Mount PicoBrick**



The Bellesta Series offers a 35W PicoBrick power module in the industry's smallest 10A footprint that is 33% smaller than an industry standard eighth brick and power pin compatible with an existing industry standard footprint. The Bellesta Series eliminates the need to use highly derated eighth or quarter brick power modules, thereby optimizing board space utilization and cost. As with other modules in the Bellesta series, a low component count results in a low cost, high performance design. The low weight, surface mount design is well suited for almost any manufacturing environment.

**Features**

- **Size - 30.5mm x 29.3 mm x 8.1 mm (1.20 in. x 1.16 in. x 0.32 in.)**
- **Surface mountable**
- **Maximum weight 18g (0.65 oz)**
- **Up to 35W of output power in high ambient temperature, low airflow environments with minimal power derating**
- **Basic insulation – 1500Vdc**
- **Negative logic on/off**
- **Monotonic start-up**
- **Starts with pre-biased output**
- **Output voltage adjustment**
- **Constant switching frequency**
- **Full, auto-recovery protection:**
  - Input under voltage
  - Output over voltage
  - Current limit
  - Short circuit
  - Thermal limit
- **Applying for UL 60950 (US and Canada), VDE 0805, CB scheme (IEC950) Safety markings**
- **CE Mark (EN60950) pending**
- **Multiple patents pending**

Base Product Code	Input Voltage	Output Voltage	Output Current	Efficiency
iPB48007A050V	36-75V	5V	7A	89%
iPB48010A033V	36-75V	3.3V	10A	88%
iPB48010A025V	36-75V	2.5V	10A	84%
iPB48010A018V	36-75V	1.8V	10A	80%
iPB48010A015V	36-75V	1.5V	10A	78%

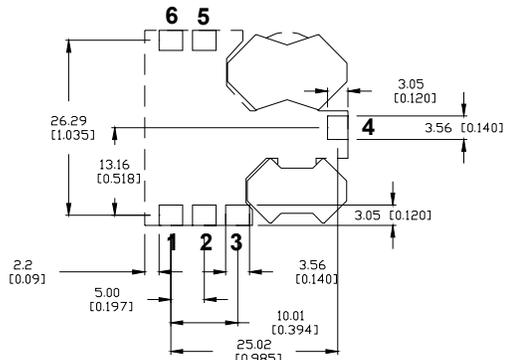
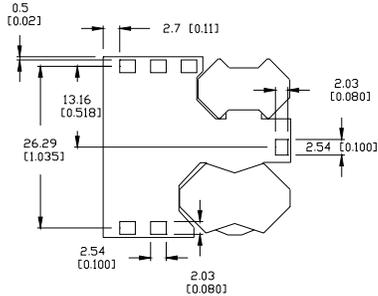
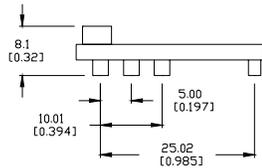
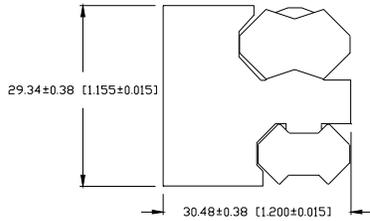
**Typical Performance**

Input Characteristics		
Operating input range	36-75V	
Transient input voltage	100V	100mS max
Turn-on voltage	33V	
Turn-off voltage	31.5V	
Start-up time	110 mS	On/Off to 90% Vout
Maximum input current	2A	Input 0-75V, Io,max
Output Characteristics		
Output voltage tolerance		Over line, load, and temp to end of life
3.3V and below	+/- 3.3% max	
5V	+/- 4% max	
Efficiency	see product table	Io,max
Line regulation	2 mV	Over rated input
Load regulation	5 mV	Over rated load
Output voltage adjustment	90%-110%	%Vo,nom
Output ripple	45 mVp-p	20MHz bandwidth
Dynamic response		Load step 25% of Io,max slew rate =0.1A/us
Transient voltage	190 mV	
Recovery time	50 uS	
Ripple frequency	400 kHz	Fixed
Protection		
Current limit inception	150% of Io,rated	
Short circuit	Io,rated	Auto-recovery hiccup
Output overvoltage	125% of Vout,nom	Auto-recovery hiccup
Environmental		
Operating temperature	-40C to 110C	Measurement point in full datasheet



## Product Brief: Belleta® iPB Series – Surface Mount PicoBrick

Dimensions are in mm [inches]



Top view - Footprint

PIN	FUNCTION	PIN	FUNCTION
1	Vout (+)	4	On/Off
2	Vout (-)	5	Vin (-)
3	Vout Trim	6	Vin (+)

### Ordering Information

Product Identifier	Package Size	Platform	Input Voltage	Output Current/Power	Output Units	Main Output Voltage	# of Outputs	Safety Class	Feature Set
i	P	B	48	010	A	033	V	- 0	01
TDK Innoveta	Picobrick	Belleta SMT	36-75V	007 – 7 010 – 10	Amps	050 – 5V 033 – 3.3V 025 – 2.5V 018 – 1.8V 015 – 1.5V	Single		01 – Standard



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](mailto:support@tdkinnoveta.com)  
<http://www.tdkinnoveta.com/>

Information furnished by TDK Innoveta is believed to be accurate and reliable. However, TDK Innoveta assumes no responsibility for its use, nor for any infringement of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of TDK Innoveta. TDK Innoveta components are not designed to be used in applications, such as life support systems, wherein failure or malfunction could result in injury or death. All sales are subject to TDK Innoveta's Terms and Conditions of Sale, which are available upon request.

Specifications are subject to change without notice.

is a trademark or registered trademark of TDK Corporation.