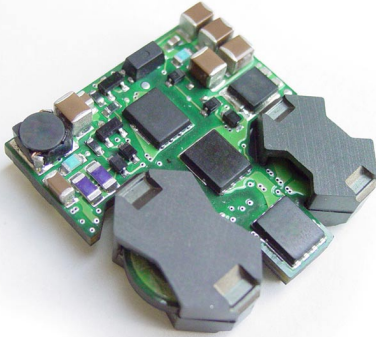


**Bellela® iPB Series DC/DC Power Modules
48V Input, 10A Output
Surface Mount PicoBrick**



The Bellela 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 Bellela 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 Bellela 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%

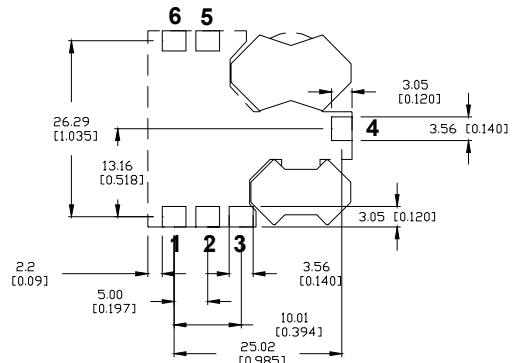
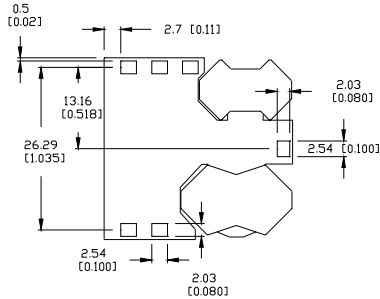
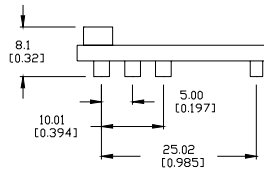
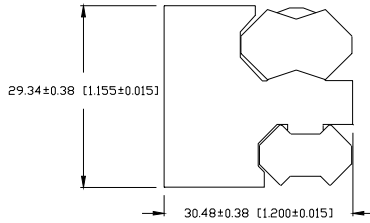
Typical Performance

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
Transient voltage	190 mV	slew rate =0.1A/us
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



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