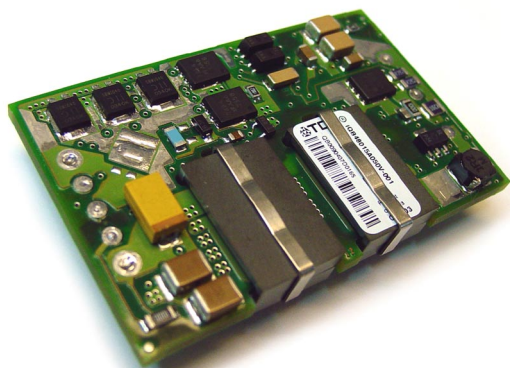


Product Brief: Belleta™ iQB Series – Single Output Quarter Brick

Belleta™ iQB Series DC/DC Power Modules 48V Input, 8-25A Output Quarter Brick



The Belleta Series offers an **industry standard quarter brick** power module with true useable power. Thanks to its low component count and single-board open-frame design approach, it provides both **better electrical and thermal performance, and lower cost** than many other suppliers' quarter brick product offerings. *Belleta™* modules are perfect for both next generation planning and cost reduction design environments.

Features

- **Standard Quarter Brick Footprint**
- **Low Profile, 8.3mm (0.33")**
- **Up to 25A of output current**
- **High efficiency – greater than 90%**
- **Up to 75W of output power in high ambient temperature, low airflow environments with minimal power derating**
- **Basic insulation – 1500Vdc**
- Choice of remote on/off configuration
- Industry standard output voltage adjustment
- Remote Sense
- Constant switching frequency
- Full, auto-recovery protection:
 - Input under voltage
 - Output over voltage
 - Current limit
 - Short circuit
 - Thermal limit
- UL 60950 (US and Canada), VDE 0805, CB scheme (IEC950)
- CE Mark (EN60950)
- Multiple patents pending

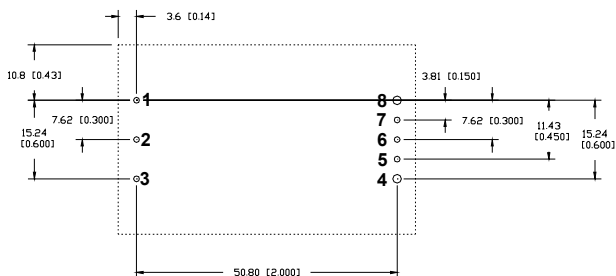
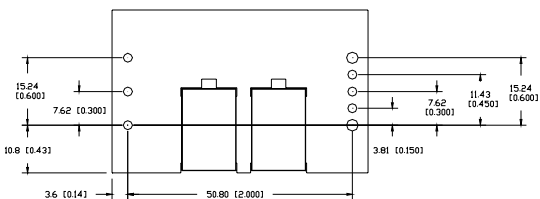
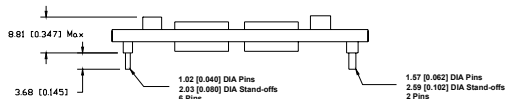
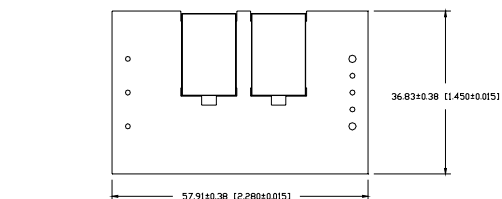
Base Product Code	Input Voltage	Output Voltage	Output Current	Efficiency
iQB48015A050V	36-75V	5V	15A	90%
iQB48008A050V	36-75V	5V	8A	90%
iQB48020A033V	36-75V	3.3V	20A	89%
iQB48010A033V	36-75V	3.3V	10A	90%
iQB48020A025V	36-75V	2.5V	20A	86%
iQB48010A025V	36-75V	2.5V	10A	87%
iQB48025A018V	36-75V	1.8V	25A	84%
iQB48015A018V	36-75V	1.8V	15A	85%
iQB48025A015V	36-75V	1.5V	25A	81%
iQB48025A012V	36-75V	1.2V	25A	78%

Typical Performance

Input Characteristics		
Operating input range	36-75V	
Transient input voltage	100V	100mS max
Turn-on voltage	33V	
Turn-off voltage	30V	
Start-up time	130 mS	On/Off to 90% Vout
Maximum input current	4A	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	I _{o,max}
Line regulation	1 mV	Over rated input
Load regulation	2 mV	Over rated load
Output voltage adjustment	90%-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	200 mV	
Recovery time	50 uS	
Ripple frequency	300 kHz	Fixed
Protection		
Current limit inception	145% of I _{o,rated}	
Short circuit	I _{o,rated}	Auto-recovery hiccup
Output overvoltage	125% of V _{out,nom}	Auto-recovery hiccup
Environmental		
Operating temperature	-40C. to 120C	Measurement point in full datasheet



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Footprint –Top View

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

Ordering Information

Product Identifier	Package Size	Platform	Input Voltage	Output Current/Power	Output Units	Main Output Voltage	# of Outputs	Safety Class	Feature Set
i	Q	B	48	015	A	050	V	- 0	00
TDK Innoveta	Quarter-brick	Belleta	36-75V	008 – 8A 010 – 10A 015 – 15A 020 – 20A 025 – 25A	Amps	050 – 5V 033 – 3.3V 025 – 2.5V 018 – 1.8V	Single		00 – Standard

Feature Set	On/Off Logic	Pin Length
00	Positive	0.145"
01	Negative	0.145"
02	Positive	0.110"
03	Negative	0.110"
04	Positive	0.200"
05	Negative	0.200"



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