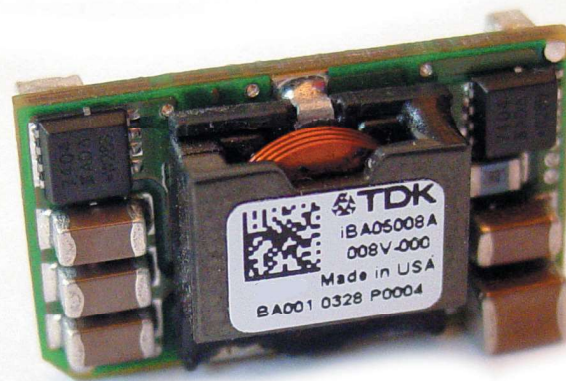


## 7 - 8A Non-isolated Point of Load

### Features

- ◆ Standard Industry Footprint
- ◆ 3.0-5.5V and 6.0-14.0V Input
- ◆ 0.8-5.0V Nominal Output
- ◆ Low 8.38mm Profile
- ◆ High operating efficiency (up to 95%)
- ◆ Constant switching frequency
- ◆ Starts with pre-biased output

### Key Market Segments & Applications



| Specifications                     |     |                                                                                                                          |  |                         |
|------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------|--|-------------------------|
| Model                              |     | iBA05008A008V                                                                                                            |  | iBC12007A008V           |
| Nominal Output Voltage             | VDC | 0.75 - 3.63                                                                                                              |  | 0.8 - 5.0               |
| Input Voltage Range                | VDC | 3.0 - 5.5 <sup>(2)</sup>                                                                                                 |  | 6.0 <sup>(1)</sup> - 14 |
| Input Current (max)                | A   | 8.5                                                                                                                      |  |                         |
| Output Voltage Tolerance           | VDC | N/A                                                                                                                      |  |                         |
| Ripple & Noise (max)(pk to pk) (3) | mV  | 75                                                                                                                       |  | 100                     |
| Line Regulation (max)              | mV  | 5                                                                                                                        |  | 20                      |
| Load Regulation (max)              | mV  | 10                                                                                                                       |  | 30                      |
| Overload Protection                | %   | Inception- 185-215% of rated output; Short circuit - auto recovery                                                       |  |                         |
| Overvoltage Protection             | -   | N/A                                                                                                                      |  |                         |
| Remote Sense                       | -   | No                                                                                                                       |  |                         |
| Remote On / Off                    | -   | Positive or Negative Logic available, see Module Selector                                                                |  |                         |
| Sequencing                         | -   | No                                                                                                                       |  | Yes                     |
| Temperature (operating)            | °C  | -40 to 125                                                                                                               |  |                         |
| Temperature (storage)              | °C  | -55 to 125                                                                                                               |  |                         |
| Humidity (operating)               | -   | 20-95% RH Non condensing                                                                                                 |  |                         |
| Humidity (storage)                 | -   | Per IPC / JEDEC J-STD-020, for MSL-1 <sup>4</sup> (<30C/85%RH) in original packaging                                     |  |                         |
| Cooling                            | -   | Convection or forced air                                                                                                 |  |                         |
| Isolation Voltage                  | VDC | none                                                                                                                     |  |                         |
| Vibration (non operating)          | -   | 5 to 50Hz @ 0.5g (4.9m/s <sup>2</sup> ), and 50 to 500Hz @ 1.5g (14.7m/s <sup>2</sup> ) per Bellcore TR-EOP-000063-5.4.4 |  |                         |
| Shock                              | -   | 196.1m/s <sup>2</sup>                                                                                                    |  |                         |
| Safety Agency Approvals            | -   | UL60950 (US and Canada), VDE0805 (IEC60950), CB scheme (IEC60950)                                                        |  |                         |
| Weight (max)                       | g   | 7                                                                                                                        |  |                         |
| Size                               | mm  | 20.3 x 11.4 x 8.38                                                                                                       |  | 27.9 x 11.4 x 8.38      |
| Warranty                           | -   | 3 Years                                                                                                                  |  |                         |

Notes: See website for detailed specifications

(1) 8.3-14V when output is >3.63V

(2) 4.5 - 5.5V when output is ≥3.0V

(3) Measured across one 0.1μF ceramic capacitor and one 47μF ceramic capacitor; BW = 20MHz

(4) iBC MSL-2

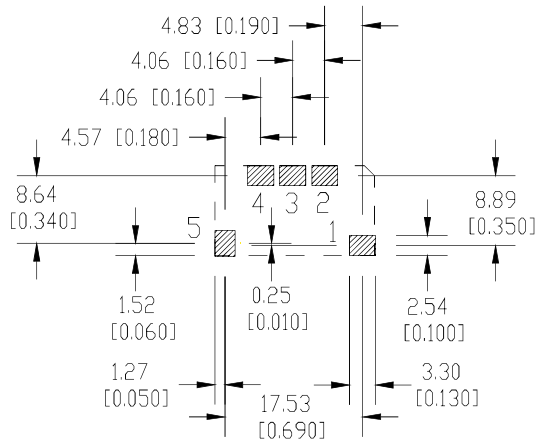
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## Model Selector

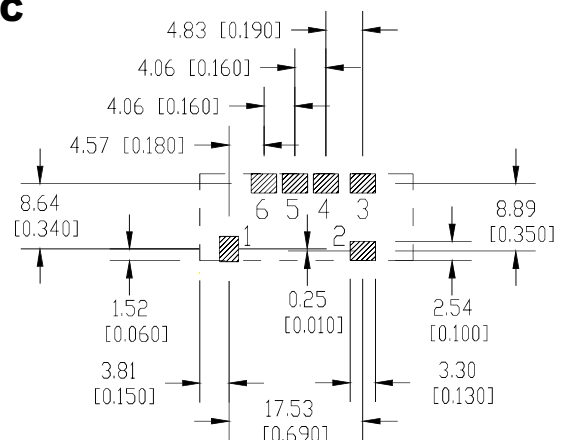
| Model               | Output Voltage (V) | Output Adjust (V) | Output Curr. (A) | Max. Output Power (W) | Efficiency at Full Load (%) | Pos. Logic On/Off | Neg. Logic On/Off | Seq. |
|---------------------|--------------------|-------------------|------------------|-----------------------|-----------------------------|-------------------|-------------------|------|
| iBA05008A008V-000-R | 0.75-3.63          | 0.75-3.63         | 8                | 26.4                  | 94 @ 3.3V                   | X                 |                   |      |
| iBA05008A008V-001-R | 0.75-3.63          | 0.75-3.63         | 8                | 26.4                  | 94 @ 3.3V                   |                   | X                 |      |
| iBC12007A008V-000-R | 0.80-5.50          | 0.80-5.00         | 7                | 35.0                  | 93 @ 5.0V                   | X                 |                   | X    |
| iBC12007A008V-001-R | 0.80-5.50          | 0.80-5.00         | 7                | 35.0                  | 93 @ 5.0V                   |                   | X                 | X    |

## Recommended Footprint (Top View)

### iBA



### iBC



## Other DC-DC Products

|            |                                                                        |
|------------|------------------------------------------------------------------------|
| CC-E       | 1.5-12W, 1 to 2 Outputs, 5 to 48VDC Input                              |
| PX         | 10-40W, 1 to 3 Outputs, 12 to 48VDC Input                              |
| iPB        | 15-35W, 1.5-5V Output, 36-75VDC Input, Pico Brick                      |
| iSA        | 30-78W, 1.2-12V Output, 36-75VDC Input, Sixteenth Bricks               |
| iEA        | 30-78W, 1.2-28V Output, 36-75VDC Input, Eighth Brick DC-DC             |
| PAE50/100  | 36-100W, 1.9-5V Output, 36-75VDC Input, Eighth Brick DC-DC             |
| iEB        | 150W, 12V Output, 42-56V Input, Eighth Brick Intermediate Bus DC-DC    |
| iQD        | 300W, 12V Output, 42-53VDC Input, Quarter Brick Intermediate Bus DC-DC |
| iQB        | 30-300W, 1.2-12V Output, 24 to 48VDC Input, Quarter Brick DC-DC        |
| PAH300/450 | 300-450W, 12 to 28V Output, 36-75VDC Input, Half Brick DC-DC           |
| PAF        | 400-700W, 1.8 to 48V output, 24 to 400VDC Input, Full Brick DC-DC      |
| FPS        | 1kW to 3kW, 24 to 48V Output, AC-DC Front Ends                         |
| iAA, iAD   | Non Isolated DC-DC Converters                                          |

## Pinout

| PIN | Function |        |
|-----|----------|--------|
|     | iBA      | iBC    |
| 1   | Vin      | On/Off |
| 2   | Gnd      | Vin    |
| 3   | Trim     | Seq    |
| 4   | Vout     | Gnd    |
| 5   | On/Off   | Trim   |
| 6   | -        | Vout   |

For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/iba-series.htm](http://us.tdk-lambda.com/lp/products/iba-series.htm)



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