



Industrial



Test

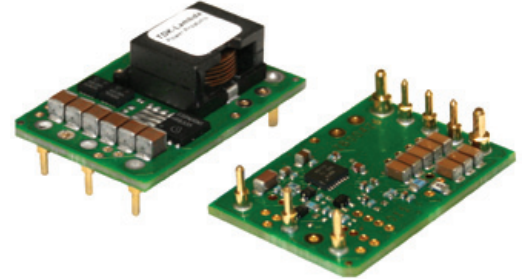


Comm



Broadcast

## 250W, 9-53V Input Non-isolated DC-DC Converter



| Features                             | Benefits                        |
|--------------------------------------|---------------------------------|
| • 250W 20A in a 1/16th brick package | • Very High Power Density       |
| • Very high Efficiency up to 97%     | • Easier Thermal Management     |
| • Wide Output Adjustment 3.3 to 15V  | • Address Multiple Applications |
| • Minimal External Components Needed | • Less Board Area Required      |

| Specification                |      |  |
|------------------------------|------|--|
| Model                        |      | i6A4W  |
| DC Output Voltage            | V    | 3.3 to 15  |
| DC Output Power (max)        | W    | 250  |
| DC Input Voltage             | V    | 9 to 53 (Turn on at 10V or greater)                |
| Efficiency                   | %    | 90 - 97  |
| Output Voltage Tolerance     | %    | ±4   |
| Switching Frequency          | kHz  | 400  |
| Line Regulation              | %    | 0.4  |
| Load Regulation              | %    | 1.2  |
| External Load Capacitance    | uF   | 0 - 1500   |
| Output Ripple and Noise      | mVpp | 20   |
| Overcurrent Protection       | A    | 27   |
| Remote On / Off              | -    | See options table                                  |
| Remote Sense                 | -    | (+) Sense, compensating up to 5% of output voltage |
| Power Good                   | -    | Optional (Full Feature Version)                    |
| Sync & Sequencing            | -    | Optional (Full Feature Version)                    |
| Operating Temperature        | °C   | -40°C to 125°C (see thermal data on website)       |
| Storage Temperature          | °C   | -55°C to 125°C                                     |
| Safety Agency Certifications | -    | Pending  |
| Weight                       | gms  | 15   |
| Size (LxWxH)                 | mm   | 33 x 22.9 x 12.7                                   |
| Warranty                     | yrs  | 3  |

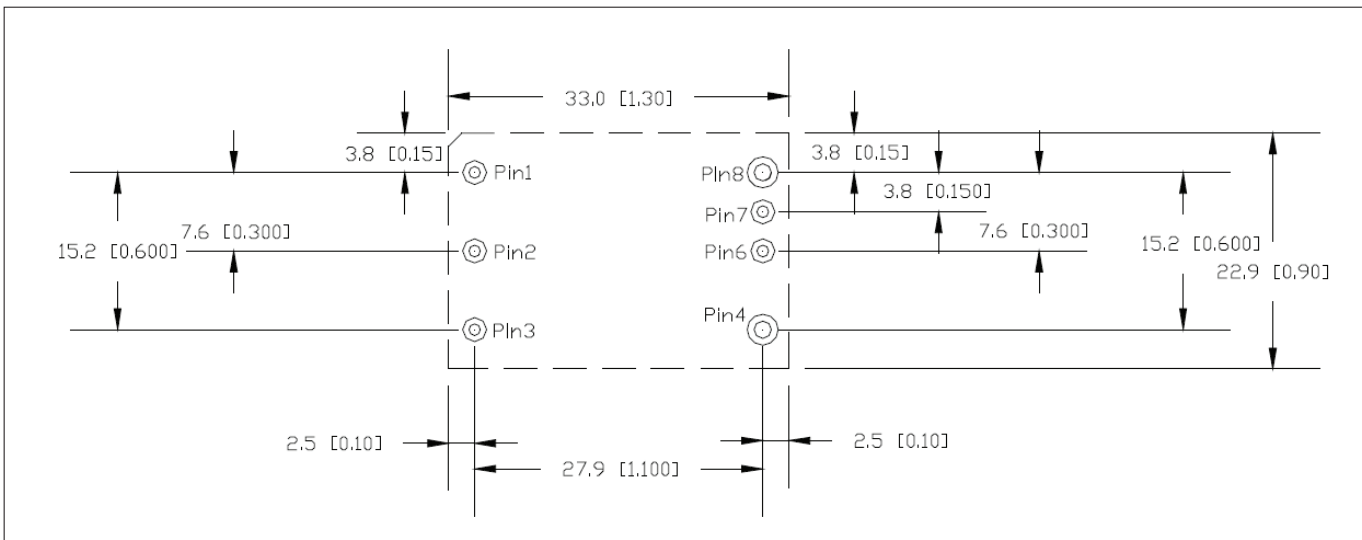
## Model Selector

| Input Model        | Input Voltage (V) | Output Current (A) | Output Voltage (V) | Positive Logic On/Off | Negative Logic On/Off | Full Feature |
|--------------------|-------------------|--------------------|--------------------|-----------------------|-----------------------|--------------|
| i6A4W20A033V-000-R | 9 to 53           | 20                 | 3.3 to 15          | Yes                   | -                     |              |
| i6A4W20A033V-001-R | 9 to 53           | 20                 | 3.3 to 15          | -                     | Yes                   |              |
| i6A4W20A033V-002-R | 9 to 53           | 20                 | 3.3 to 15          | Yes                   | -                     | Yes          |
| i6A4W20A033V-003-R | 9 to 53           | 20                 | 3.3 to 15          | -                     | Yes                   | Yes          |

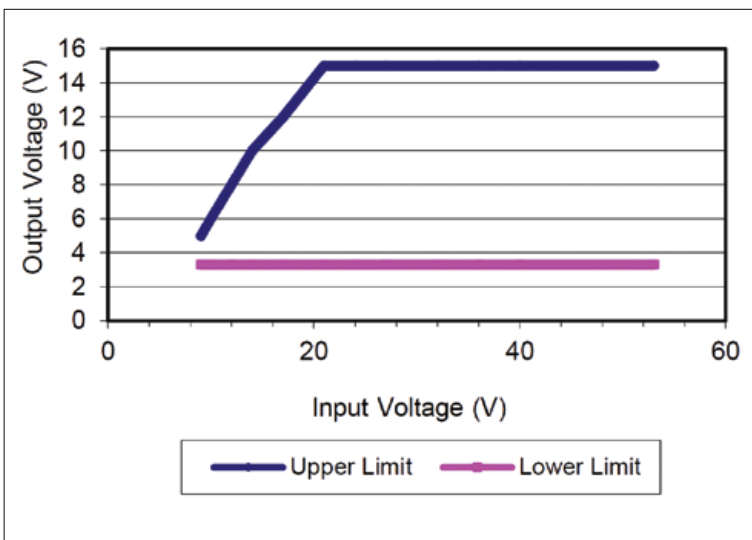
### Preferred

**Note:** Output voltage cannot exceed input voltage (see graph below).

## Outline Drawing i6A4W Series



## Output Voltage Vs Input Voltage Operating Range



## Pin Assignment

| PIN | Function          | PIN | Function      |
|-----|-------------------|-----|---------------|
| 1   | VIN (+)           | 7   | SENSE (+)     |
| 2   | ON / OFF          | 8   | VOUT (+)      |
| 3   | VIN (-)           | 32  | Sync (Option) |
| 4   | VOUT (-)          | 33  | MS (Option)   |
| 5   | PWR GOOD (Option) | 34  | SEQ (Option)  |
| 6   | TRIM              |     |               |



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