

## 85W, 12A Non-isolated SMT Point of Load

### Features

- ◆ DOSA Compatible Footprint
- ◆ Surface Mountable
- ◆ Constant Switching Frequency
- ◆ No external loop tuning components needed
- ◆ Excellent Transient Response



### Key Market Segments & Applications



### Specifications

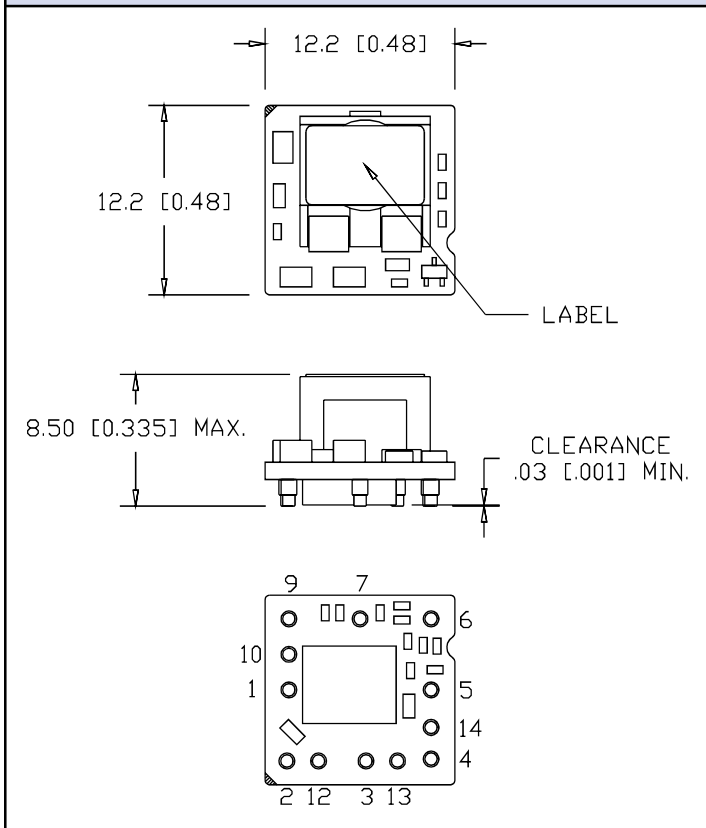
| Model                        |          | iCH12                                                    |
|------------------------------|----------|----------------------------------------------------------|
| DC Output Voltage            | V        | 0.7 - 8.5                                                |
| DC Output Power (max)        | W        | 85                                                       |
| DC Input Voltage             | V        | 4.5 - 14                                                 |
| Efficiency                   | %        | 88.5 - 97                                                |
| Output Voltage Tolerance     | %        | ±3                                                       |
| Switching Frequency          | kHz      | 500                                                      |
| Line Regulation              | mV       | 5                                                        |
| Load Regulation              | mV       | 6                                                        |
| External Load Capacitance    | uF       | 200 - 2000                                               |
| Output Ripple and Noise      | mVpp     | 15                                                       |
| Overcurrent Protection       | A        | 22A typical                                              |
| Remote On / Off              | -        | Positive or Negative Logic available, see Model Selector |
| Remote Sense                 | -        | (+) Sense, compensating up to 0.5V                       |
| Power Good                   | -        | Yes, Low on fail                                         |
| Operating Temperature        | °C       | -40 to 115 (see thermal data on website)                 |
| Storage Temperature          | °C       | -55 to 125                                               |
| Safety Agency Certifications | -        | Pending                                                  |
| Weight                       | g / oz   | 2.5g / 0.088 oz                                          |
| Size (LxWxH)                 | mm / in. | 12.2 x 12.2 x 8.5 / 0.48 x 0.48 x 0.335                  |
| Warranty                     | yrs      | 3 years                                                  |

## Model Selector

| Input Model         | Input Voltage (V) | Output Current (A) | Output Voltage (V) | Positive Logic On/Off | Negative Logic On/Off |
|---------------------|-------------------|--------------------|--------------------|-----------------------|-----------------------|
| iCH12012A007V-007-R | 4.5 - 14          | 12                 | 0.7 - 8.5          | -                     | yes                   |
| ICH12012A007V-006-R | 4.5 - 14          | 12                 | 0.7 - 8.5          | yes                   | -                     |

Preferred Model

## Outline Drawing



## Pinout

| PIN | Function  | PIN | Function      |
|-----|-----------|-----|---------------|
| 1   | ON / OFF  | 8   | Not Fitted    |
| 2   | VIN       | 9   | Not Connected |
| 3   | GND       | 10  | PWR GOOD      |
| 4   | VOUT      | 11  | Not Fitted    |
| 5   | SENSE (+) | 12  | VIN           |
| 6   | TRIM      | 13  | GND           |
| 7   | GND       | 14  | VOUT          |

## Other Industrial Products

|                         |                                                            |
|-------------------------|------------------------------------------------------------|
| CC-E                    | 1.5 - 30W 5, 12, 24 or 48V input isolated DC-DC converters |
| PX                      | 10 - 60W 12, 24 or 48V input isolated DC-DC converters     |
| iAH, iBF, iBH, iCF, iCG | 3 - 20A DOSA2 non isolated DC-DC converters                |
| iJA, iJB                | 35 - 60A non isolated DC-DC converters with PMBus          |

For Additional Information, please visit  
<https://product.tdk.com/info/en/products/power/index.html>



## Voltage Operating Range

