

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

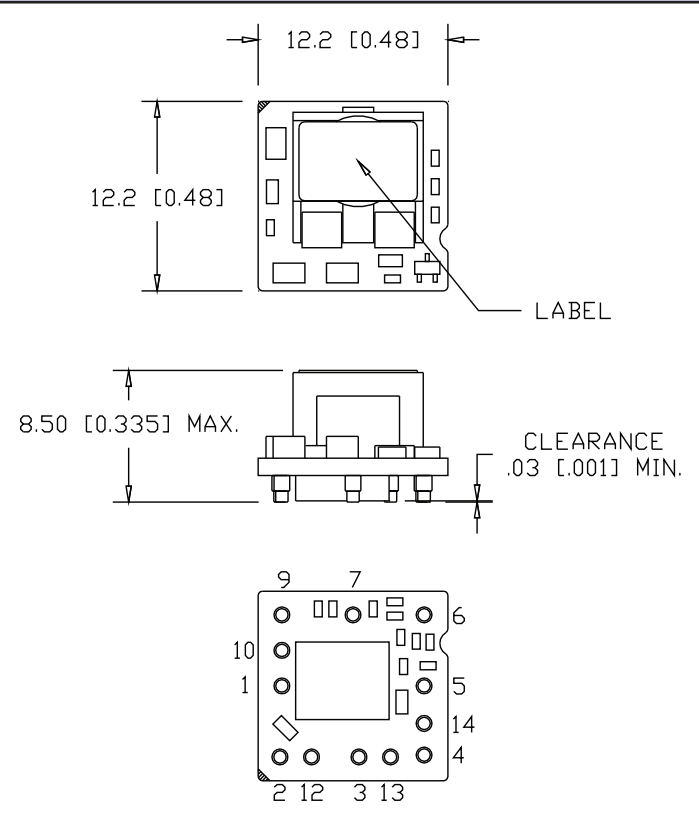
Model		iCH12
DC Output Voltage	V	0.7 - 8.5
DC Output Power (max)	W	85
DC Input Voltage	V	4.5 - 14
Efficiency	%	88.5 - 97
Output Voltage Tolerance	%	±3
Switching Frequency	kHz	500
Line Regulation	mV	5
Load Regulation	mV	6
External Load Capacitance	uF	200 - 2000
Output Ripple and Noise	mVpp	15
Overcurrent 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	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark
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

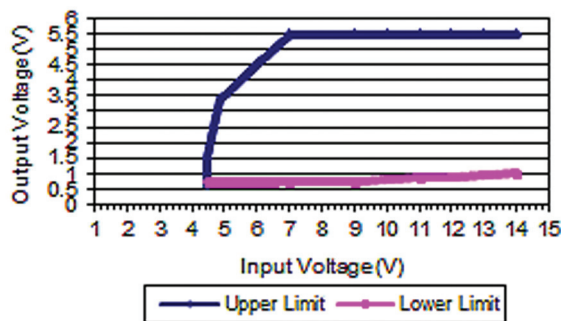
Other Industrial Products

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/en/power/>



Voltage Operating Range



Output voltage vs. Input Voltage Operating Range