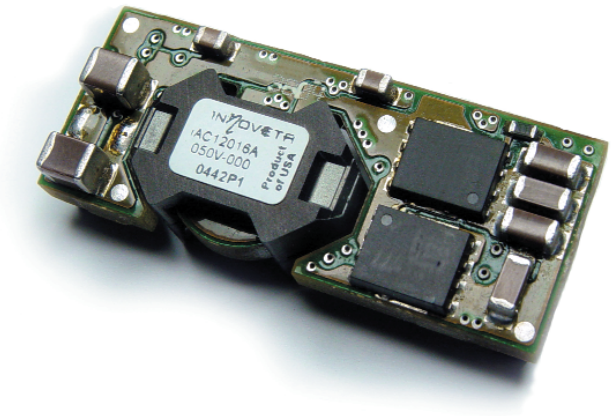
TDK·Lambda

iAA/iAC Series

15 - 16A Point of Load Converter



- Standard Industry Footprint
- 3.0-5.5V and 6.0-14.0V Inputs
- 0.8-5.0V Nominal Outputs
- Surface Mount
- Low 8.5mm Profile
- Non Isolated Output

RoHS

Features and Benefits

Feature	Benefit
◆ High operating efficiency (up to 95%)	◆ Reduced system heating
◆ Constant switching frequency	◆ Easier system filtering
◆ Starts with pre-biased output	◆ Supports complex digital systems

Specifications

ITEMS / MODEL		iAA05015A008V	iAC12016A008V
Nominal Output Voltage	VDC	0.75-3.63	0.8 - 5.0
Input Voltage Range	VDC	3.0-5.5[2]	6.0[1]-14
Input Current (max)	A	16	18
Output Voltage Tolerance	VDC	±3.3% Vo, set	-2.5 to +3.5% Vo, set
Ripple & Noise (max)(pk to pk) (3)	mV	75	100
Line Regulation (max)	mV	5	10
Load Regulation (max)	mV	10	15
Overload Protection	%	Inception - 175-235% of rated output; Short circuit - auto recovery	
Overvoltage Protection	-	N/A	
Remote Sense	-	Yes	
Remote On / Off	-	Positive or Negative Logic available, see Model Selector	
Sequencing	-	See Model Selector	
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[4] (<30C/85%RH) in original packaging	
Cooling	-	Convection or forced air	
Isolation Voltage	-	N/A	
Vibration (non operating)	-	5 to 50Hz @ 0.5g (4.9m/s²), and 50 to 500Hz @ 1.5g (14.7m/s²) per Bellcore TR-EOP-000063-5.4.4	
Shock	-	196.1m/s²	
Safety Agency Approvals	-	UL60950 (US and Canada), VDE0805 (IEC60950), CB scheme (IEC60950)	
Weight (max)	g	12	
Size	mm	33 x 13.5 x 8.5	
Warranty	-	3 Years	

Notes: See website for detailed specifications
(1) 8.3 - 14.0V 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) iAC MSL-2

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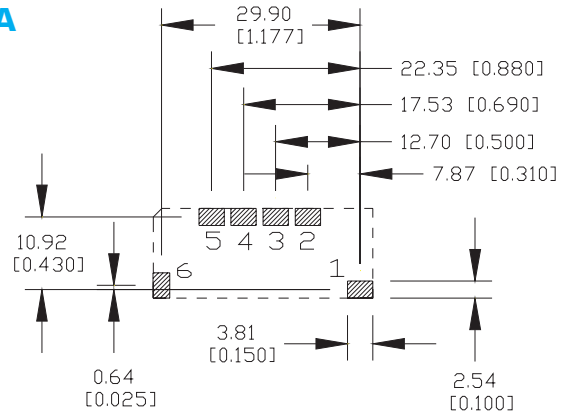
Model Selector

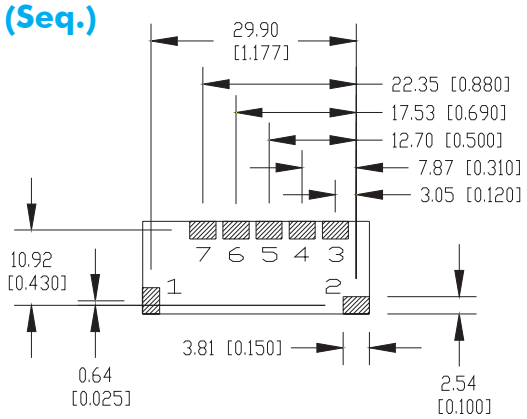
Model	Output Adjust (V)	Output Curr. (A)	Max. Output Power (W)	Efficiency at Full Load (%)	Pos. Logic On/Off	Neg. Logic On/Off	Sequencing
iAA05015A008V-000-R	0.75 - 3.63	15	49.5	94.5	X		
iAA05015A008V-001-R	0.75 - 3.63	15	49.5	94.5		X	
iAC12016A008V-000-R	0.80 - 5.00	16	80.0	94.5 @ 5V	X		X
iAC12016A008V-001-R	0.80 - 5.00	16	80.0	94.5 @ 5V		X	X
iAC12016A008V-002-R	0.80 - 5.00	16	80.0	94.5 @ 5V	X		
iAC12016A008V-003-R	0.80 - 5.00	16	80.0	94.5 @ 5V		X	

Recommended Footprint (Top View)

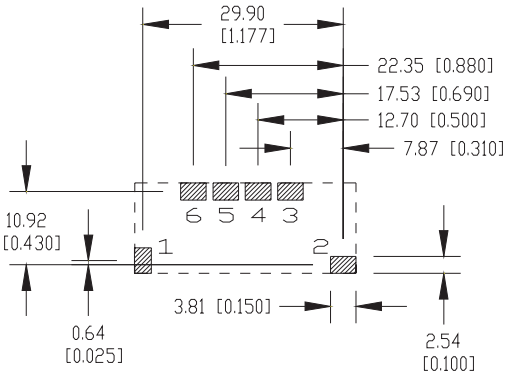
iAA



iAC (Seq.)



iAC (No Seq.)



Pinout

PIN	Function iAA	iAC(Seq)	iAC(No Seq)
1	Vin	On/Off	On/Off
2	Gnd	Vin	Vin
3	Vout	Seq	Gnd
4	Trim	Gnd	Vout
5	Sense	Vout	Trim
6	On/Off	Trim	Sense
7	-	Sense	-

Other Lambda 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 O/P, 42-56V Input, Eighth Brick Interm. Bus DC-DC
iQD	300W, 12V O/P, 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, 12-28V Output, 36-75VDC Input, Half Brick DC-DC
PAF	400-700W, 1.8-48V O/P, 24-400VDC Input, Full Brick DC-DC
FPS	1kW to 3kW, 24-48V Output, AC-DC Front Ends
iBC, iAD	Non Isolated DC-DC Converters

For Additional Information, please visit
us.tdk-lambda.com/lp/products/iaa-series.htm

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