Ordering information

Product Identifier	Platform	Input Voltage	Output Current	Output Unit	Output Range	# of Output		Feature Set	RoHS Indicator
i	6A	24	014	A	033	V	---	001	-R
TDK-Lambda Dallas Technical Center	33.0 x 22.9mm (1/16 Brick)	9V to 40V	14	Amps	3.3V	Single		See option table	RoHS Compliant

Option Table

Feature Set	Output Voltage Set method	On/Off logic	OCP	Note
001	TRIM-pin	Negative	Auto Recovery	-

Product offering

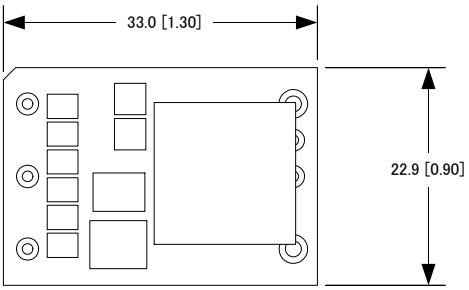
Code	Input Voltage	Output Voltage	Output Current	Maximum Output Power
i6A24014A033V	9V - 40V	3.3V - 24V	14A	250W

Safety Standard

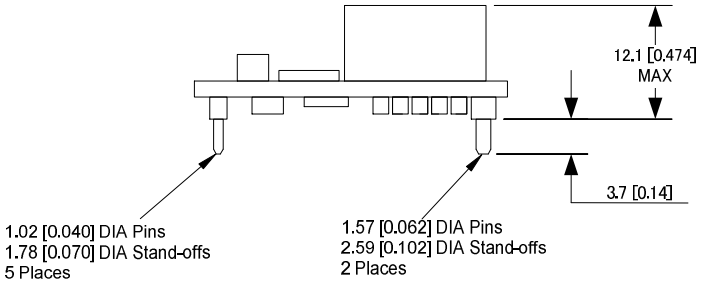
Approved by UL60950-1, CSA60950-1, EN60950-1

Mechanical Specification

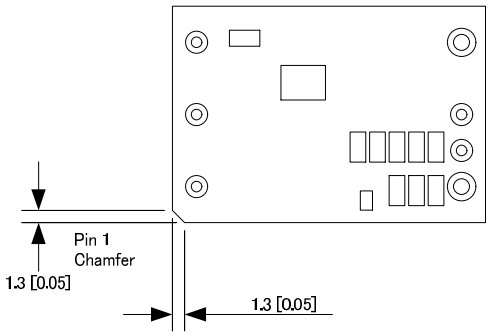
Dimensions are in mm [inch]. Unless otherwise specified tolerance are x.x±0.5 [0.02], x.xx±0.25 [0.010]



TOP VIEW



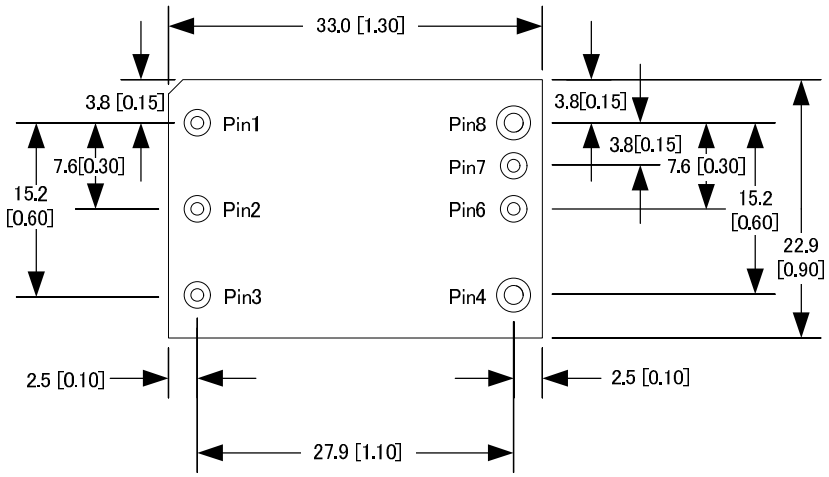
SIDE VIEW



BOTTOM VIEW

Recommended Hole Pattern - Standard (Top view)

Dimensions are in mm [inch]. Unless otherwise specified tolerance are x.x±0.5 [0.02], x.xx±0.25 [0.010]



Pin Assignment :

PIN	FUNCTION
1	Vin (+)
2	On/Off
3	Vin (-) /GND
4	Vout (-) / GND
6	TRIM
7	SENSE (+)
8	Vout (+)

Pin base material is brass or copper with gold over nickel plating; the maximum module weight is 15g (0.53 oz).

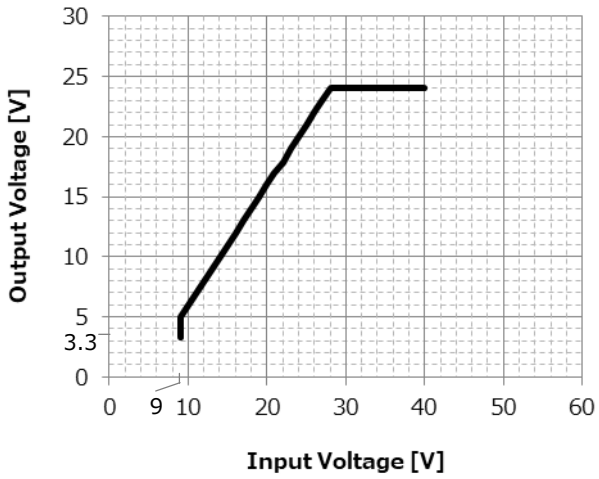
Absolute Maximum Rating

Stress in excess of Absolute Maximum Rating may cause permanent damage to the device

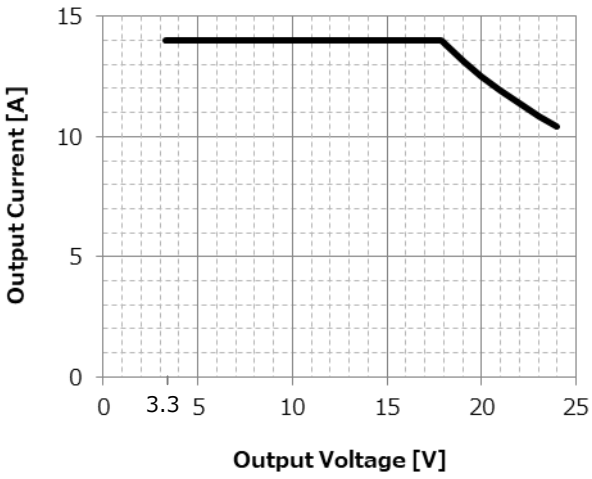
Characteristic	Min.	Max.	Unit	Note & Condition
Input Voltage	0	53	V	
Storage Temperature	-55	125	°C	
Operating Temperature range(Tc)	-40	125	°C	Measured at the location specified in the thermal measurement figure; maximum temperature varies with output current – see curve in the thermal performance of instruction manual.

Input Voltage vs. Output Voltage limitation

Output Voltage limitation



Output Current limitation



If operating range is outside of area, output ripple may increase.

Electrical specification

Unless otherwise specified, specifications apply over all rated Input Voltage, Resistive Load, and Temperature conditions.

Input Specification

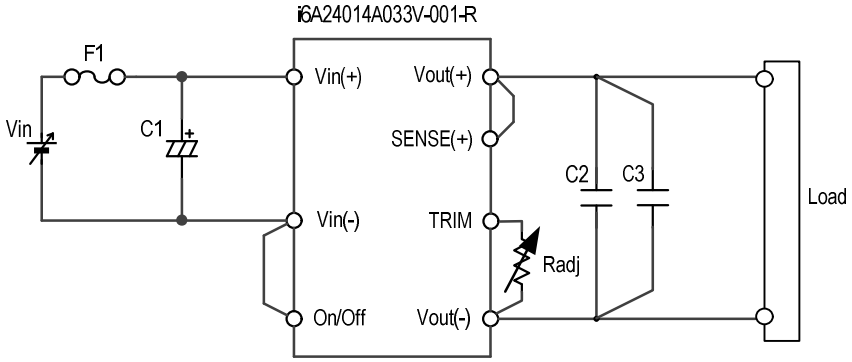
Characteristic	Min.	Typ.	Max.	Unit	Note & Condition
Operating Input Voltage	9.0	---	40	V	Vin ≧ Vo + 4V
Maximum Input Current	---	---	14	A	Vin= min to max; Io=max
Startup Delay Time from application of input voltage	---	4	---	ms	Vo=0 to 0.1*Vo; on/off=on, Io=max, Tc=25˚C
Startup Delay Time from on/off	---	3	---	ms	Vo=0 to 0.1*Vo; Vin=nom, Io=max,Tc=25˚C
Output Voltage Rise Time	---	10	---	ms	Io=max,Tc=25˚C, Vo=0.1 to 0.9*Vo
Input Ripple Rejection	---	50	---	dB	@ 120 Hz
Turn on input voltage	---	8	---	V	
Turn off input voltage	---	7	9	V	

Caution: The power module is not internally fused. An external input line fast blow fuse or normal blow fuse with a maximum value of 25A required.

Output Specification

Characteristic		Min.	Typ.	Max.	Unit	Note & Condition
Output Voltage Initial Set point		-2		+2	%	Vo=3.3Vsetting, Vin=nom; Io=min; Tc = 25˚C
Output Voltage Tolerance		-4	-	+4	%	Over all rated input voltage, load, and temperature conditions to end of life
Efficiency	Vo = 3.3V	---	92.5	---	%	Vin=12V; Io=max; Tc=25˚C
	Vo = 5V	---	94.5	---	%	
Efficiency	Vo = 5V	---	92.5	---	%	Vin=24V; Io=max; Tc=25˚C
	Vo = 12V	---	96.5	---	%	
	Vo = 15V	---	97	---	%	
	Vo = 20V	---	98	---	%	
Line Regulation		---	0.3	---	%	Vin=min to max
Load Regulation		---	1.0	---	%	Io=min to max
Output Current		0	---	14	A	Observe maximum power limit
Output Current Limiting Threshold		---	22	---	A	Vo = 0.9*Vo,nom, Tc<max
Short Circuit Current		---	0.5	---	A	Vo = 0.25V, Tc = 25˚C
Output Ripple and Noise Voltage		---	20	---	mVpp	Measured across one 1000 pF ceramic capacitor and one 22uF ceramic capacitor – see input/output ripple measurement figure; BW = 20MHz.
Output Voltage Adjustment Range		3.3	---	24	V	
Output Voltage Sense Range		---	---	5	%	

Typical application circuit



External Component values:

F1	Input Fuse	25A(max)
C1	Input Capacitor	120uF-63V
C2	Output Capacitor	10uF-50V×2
C3	Output Capacitor for bypass noise	1000pF-50V
Radj	Trim resistor for output voltage	See instruction manual