IK series

XP Power

0.25W

DC-DC converters

The IK series is housed in a SIP4 or DIP8 plastic case for PCB mounting. Featuring a ±10% input voltage range for 5, 12 & 24VDC nominal inputs, offering single outputs of 3.3, 5, 7.2, 9, 12, 15, 18 & 24VDC.

The 0.25W IK provides 1kVDC isolation between input and output as standard, with 3kVDC isolation available as an option. The operating temperature range is from -40°C to +85°C.

Features

- Unregulated single output
- ±10% input range
- Single outputs 3.3 to 24VDC
- SIP4 or DIP8 package
- 1.0kVDC isolation, 3.0kVDC option
- -40°C to +85°C operating temperature
- 3 year warranty

Applications

Robotics
Instrumentation
Technology
Industrial
Process control

Dimensions

See mechanical details

More resources

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Models & ratings

Model number(1,2)	Input voltage	Output voltage	Output current(3)	No load input current	Efficiency
IK0503SA	5.0VDC	3.3VDC	75.70mA	20mA	66%
IK0505SA		5.0VDC	50.00mA		66%
IK0507SA		7.2VDC	34.72mA		66%
IK0509SA		9.0VDC	27.77mA		68%
IK0512SA		12.0VDC	20.83mA		68%
IK0515SA		15.0VDC	16.67mA		68%
IK0518SA		18.0VDC	13.88mA		68%
IK0524SA		24.0VDC	10.41mA		70%

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Notes:

1. For DIP package, replace 'S' in model number with 'D'.
2. Add suffix '-H' to model number for 3000VDC isolation.
3. Operation at no load will not damage unit but it may not meet all specifications.

Models & ratings

Model number[1,2]	Input voltage	Output voltage	Output current[3]	No load input current	Efficiency
IK1203SA	12.0VDC	3.3VDC	75.70mA	15mA	65%
IK1205SA		5.0VDC	50.00mA		65%
IK1207SA		7.2VDC	34.72mA		68%
IK1209SA		9.0VDC	27.77mA		64%
IK1212SA		12.0VDC	20.83mA		62%
IK1215SA		15.0VDC	16.67mA		67%
IK1218SA		18.0VDC	13.88mA		67%
IK1224SA		24.0VDC	10.41mA		54%
IK2403SA	24.0VDC	3.3VDC	75.70mA	8mA	60%
IK2405SA		5.0VDC	50.00mA		62%
IK2407SA		7.2VDC	34.72mA		61%
IK2409SA		9.0VDC	27.77mA		62%
IK2412SA		12.0VDC	20.83mA		56%
IK2415SA		15.0VDC	16.67mA		56%
IK2418SA		18.0VDC	13.88mA		55%
IK2424SA		24.0VDC	10.41mA		59%

Notes:

1. For DIP package, replace 'S' in model number with 'D'.
2. Add suffix '-H' to model number for 3000VDC isolation.
3. Operation at no load will not damage unit but it may not meet all specifications.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range		±10		%	Nominal
Input reflected ripple current		20		mA pk-pk	12µH inductor, 5Hz to 20MHz
Input reverse voltage protection	None				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage	See models & ratings table				
Minimum load	0			%	Operation at no load will not damage unit but it may not meet all specifications.
Line regulation		1.2/1		%	Δ Vin
Load regulation		10		%	20-100% load change, operation at no load will not damage unit but it may not meet all specifications. (3.3VDC models ±20%)
Setpoint accuracy		±3		%	
Ripple & noise		100		mV pk-pk	20MHz bandwidth
Temperature coefficient		0.02		%/°C	
Maximum capacitive load		100		µF	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency	See models & ratings table				
Isolation voltage	1000			VDC	Add suffix '-H' to model number for 3000VDC isolation.
Isolation resistance		10^9		Ω	
Isolation capacitance		60		pF	
Switching frequency		80		kHz	Variable
Mean time between failure		>1.1		Mhrs	MIL-HDBK-217F, +25°C GB

Environmental

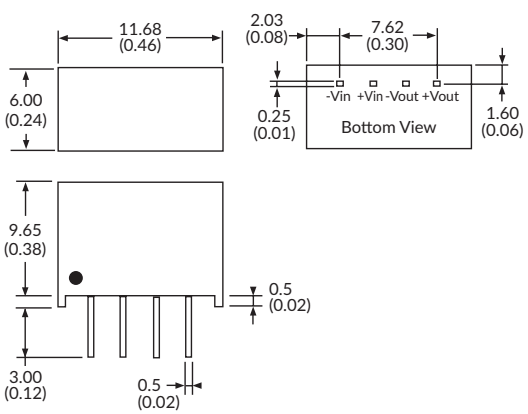
Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-40		+85	°C	
Storage temperature	-40		+125	°C	
Case temperature			+100	°C	
Cooling	Convection cooled				

Safety approvals

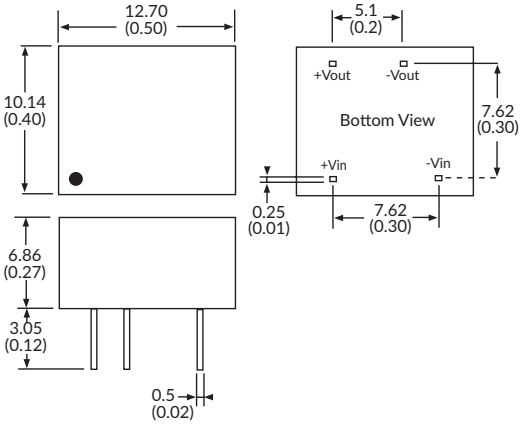
Certification	Standard	Notes & conditions
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details

SIP package



DIP package



Notes:

1. All dimensions in mm (inches).
2. Pin pitch tolerance: ±0.35 (±0.014)
3. Case tolerance: ±0.5 (±0.02)
4. Weight: SIP 1.4g (0.003lbs), DIP 1.8g (0.004lbs)