

Features

- ★ Continuous Short Circuit Protection
- ★ 14 PIN DIP Package
- ★ In-Out Isolation Voltage 1000 VDC
- ★ MTBF>1million hours(25°C)
- ★ Temperature Range:-40°C to +85°C
- ★ UL94V-0 In flaming retarding package
- ★ Low Ripple and good EMC features

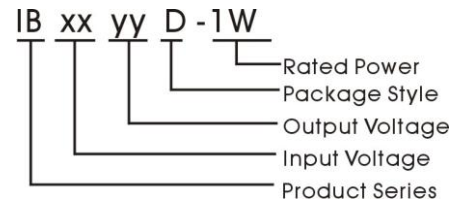


Applications

The IB_D-1W Series are specially designed for applications where a single power supply is highly isolated from the input power supply in a distributed power supply system on a circuit board

These products apply to where:

- 1) 1000 VDC input and output isolation;
- 2) Input voltage variation $\leq \pm 5\%$;
- 3) Regulated and low ripple noise is not required.



Model Detail List Specification

Model Number	Input Voltage range (nominal voltage)	Output Voltage	Output Current (mA)		Input Current Full load (mA)		Efficiency	Max. Capacitive Load(μF)
			Min.	Max.	Max.	No.		
IB0505D-1W	4.75~5.25VDC (5 VDC)	5.0V	20	200	277	38	72%	200
IB0509D-1W		9.0V	11	111	273		73%	
IB0512D-1W		12.0V	8	83	269		74%	
IB0515D-1W		15.0V	7	67	268		75%	
IB1205D-1W	11.4~12.6VDC (12 VDC)	5.0V	20	200	114	32	73%	
IB1209D-1W		9.0V	11	111	109		76%	
IB1212D-1W		12.0V	8	83	107		77%	
IB1215D-1W		15.0V	7	67	108		77%	
IB1505D-1W	14.25~15.75V DC (15 VDC)	5.0V	20	200	90	27	74%	
IB1509D-1W		9.0V	11	111	87		76%	
IB1512D-1W		12.0V	8	83	86		77%	
IB1515D-1W		15.0V	7	67	87		77%	
IB2405D-1W	22.8~25.2VDC (24 VDC)	5.0V	20	200	55	23	75%	
IB2409D-1W		9.0V	11	111	54		77%	
IB2412D-1W		12.0V	8	83	53		78%	
IB2415D-1W		15.0V	7	67	54		77%	

Overload Protection

Under normal operating conditions, the output circuit of these products has no protection against over-current. The simplest method is to connect a self-recovery fuse in series at the input end or add a circuit breaker to the circuit.

Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.1		1	W
Line Voltage Regulation	For Vin change of ±5%			±1.5	%
Load regulation	10% to 100% load	5V output	0.01	0.02	
		12V output	0.01	0.02	
		15V output	0.01	0.02	
		24V output	0.01	0.02	
Ripple	20MHz	Output voltage ≤12V		10	mVp-p
Noise	Bandwidth	others		20	
Temperature Drift	100% full load			±0.03	%/°C
Short Circuit Protection		Continuous, automatic recovery			
Input Filter		C Filter			

Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load			20	30	°C
Operating Temperature		-45		+85	
Storage Temperature	Power derating (above 85°C)	-55		+125	
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

Common Specifications

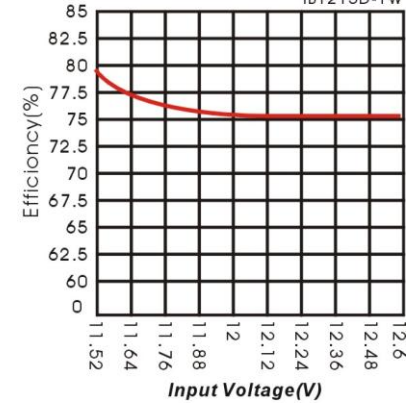
Item	Test Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Tested for 1 minute and leakage current less than 1 mA	1000			VDC
Switching Frequency	Full load, nominal input		100		KHz
MTBF	MIL-HDBK-217F@25°C	3500			K hours
Isolation Resistance	Test at 500VDC	1000			MΩ
Isolation Capacitance			300		PF
Weight			2.5		g

Input Specifications

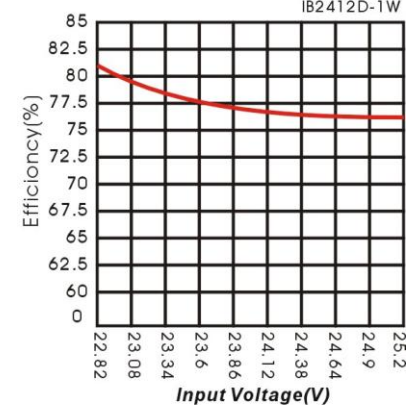
Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	5 VDC Input (4.75~5.25V)			6	VDC
	12 VDC Input (11.4~12.6V)			13	
	15 VDC Input (14.25~15.75V)			16	
	24 VDC Input (22.8~25.2V)			28	
Input surge voltage (1 sec. Max.)	5 VDC Input (4.75~5.25V)			10	VDC
	12 VDC Input (11.4~12.6V)			14	
	15 VDC Input (14.25~15.75V)			18	
	24 VDC Input (22.8~25.2V)			28	

Product typical Curve

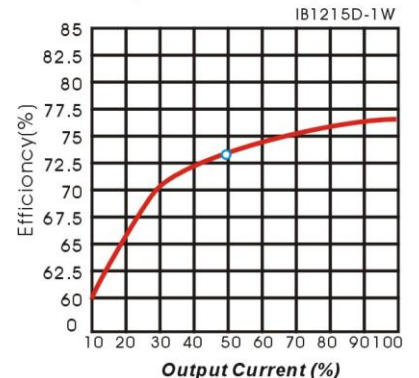
Efficiency VS Input Voltage curve (Full Load) IB1215D-1W



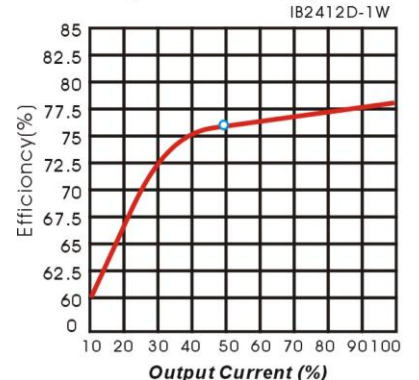
Efficiency VS Output Voltage curve (Vin=Vin-nominal) IB2412D-1W



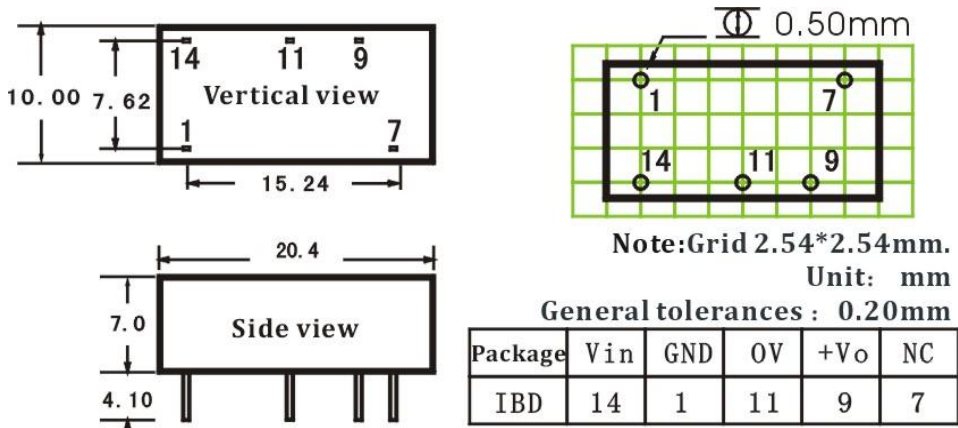
Output Load VS Efficiency curve (Vin=Vin-nominal) IB1215D-1W



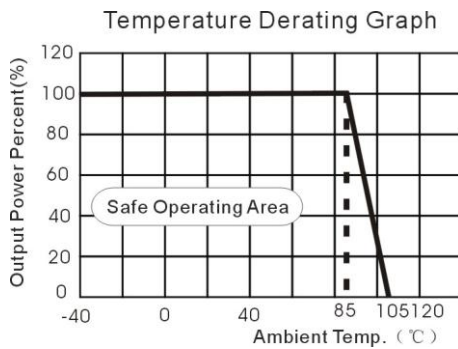
Efficiency VS Output Load curve (Vin=Vin-nominal) IB2412D-1W



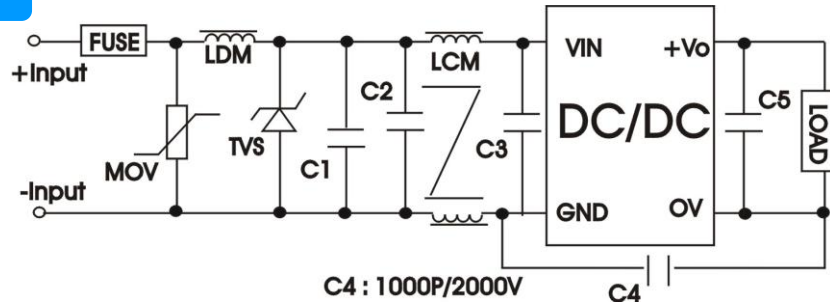
Mechanical Dimensions & Recommended Footprint



Temperature Derating Graph



EMC Recommended Circuit



EMC Module Application Circuit

