

FEATURES

- Small volume, high power density
- High efficiency, low output ripple and noise
- Low zero-load power consumption, low static current
- Long time short circuit protection and self-recovery
- superior thermal stability and temperature characteristics
- Wide temperature performance at full 1 watt load: -40 ~ +85
- Isolation Voltage:3000VDC
- High Reliability (MTTF≥350 ten thousand hours)
- International standard SIP package, save PCB installation space
- Environmental design, ROHS compliant
- 100% full load aging



RoHS
Isolate/Stabilize
Positive and negative output

PRODUCT MODEL LIST

Order Code	Nominal Input Voltage (V)		Nominal Output Voltage		Efficiency [Typ] (%)	Capacitive Load [Max] (uF)
	Nominal	Range	Voltage (V)	Current (mA)		
IE0505S-2W	5	4.75~5.25	±5	±200	62	2200
IE0509S-2W			±9	±111	63	1000
IE0512S-2W			±12	±83	68	1000
IE0515S-2W			±15	±67	68	1000
IE1205S-2W	12	11.4~12.6	±5	±200	64	2200
IE1209S-2W			±9	±111	66	1000
IE1212S-2W			±12	±83	68	1000
IE1215S-2W			±15	±67	68	1000
IE2405S-2W	24	22.8~25.2	±5	±200	70	2200
IE2409S-2W			±9	±111	66	1000
IE2412S-2W			±12	±83	67	1000
IE2415S-2W			±15	±67	66	1000

Ps : *The positive and negative output capacitive loads are the same.

OUTPUT CHARACTERISTICS

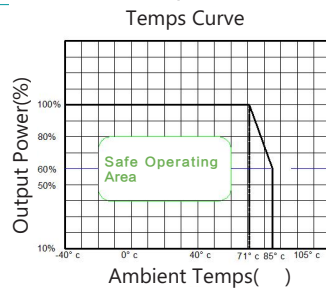
Parameter	Conditions	Min.	Typ.	Max.	Units
Output Power		0.1		1	W
Line Voltage Regulation	Input voltage change ±1% at rated load			±0.5	%
Load Regulation	Load varies from 10% to 100% at nominal input			±2	
Output voltage accuracy	100% load			±3	
Quiescent Current	Output load is 0 at nominal input	IE05XX		≤25	mA
		IE12XX		≤20	
		IE24XX		≤13	
Temps Drift Coefficient	Rated load			±0.03	%/
Ripple & Noise	At 20MHz bandwidth		30	60	mVp-p
Switching Frequency	Rated input voltage		100		KHz
Output Short Circuit Protection	Sustainable and automatic restoration				
Input Filter	Filter capacitor				
Hot Plug	Nonsupport				

Insulation Characteristic

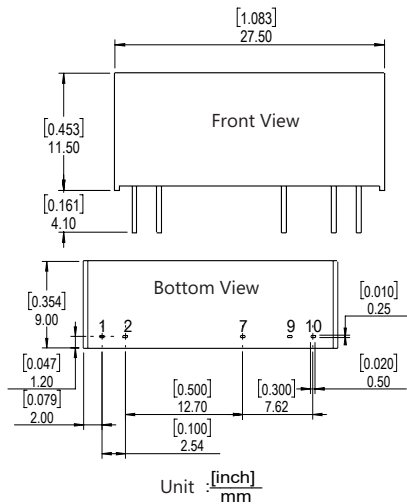
Parameter	Conditions	Min.	Typ.	Max.	Units
Insulation Resistance	500VDC	1000			M
Insulation Voltage	Test time 1 minute, leakage current less than 1 mA	3000			VDC

All Specifications Subject To Change Without Notice

General Characteristic					
Parameter	Conditions	Min.	Typ.	Max.	Units
Storage Humidity		5		95	%
Operating Temps		-40		85	
Storage Temps		-55		125	
Operating Case Temps			15	25	
Pin Welding Temps	Welding joint 1.5mm from case,10 seconds operation			300	
MTTF	MIL - HDBK - 217@25	350			10000 hours
Weight			4.6		g
Cooling	Free air convection				
Case Material	Flame-retardant and heat-resistant plastic (UL94-V0)				



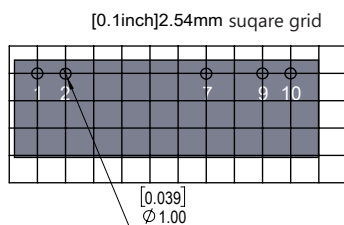
Shape & Pin Dimensions



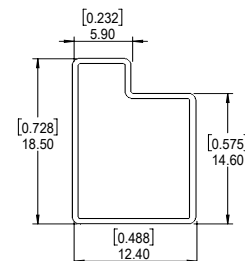
Pin	Function
1	Vin
2	GND
7	+Vo
9	-Vo
10	0V

ps:
Terminal section tolerance: ± 0.10 [± 0.004]
Unmarked tolerance: ± 0.25 [± 0.010]

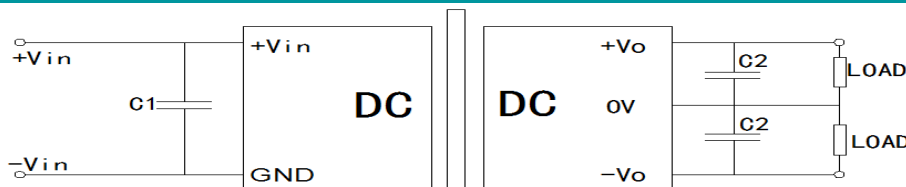
PCB



Package Dimensions



Basic Application Circuit



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Options of C1、C2:

Input Voltage	External Capacitance	Output Voltage	External Capacitance
5VDC	4.7uF	±5VDC	4.7uF
12VDC	2.2uF	±9VDC	2.2uF
24VDC	0.47uF	±12VDC	1uF
---	---	±15VDC	0.47uF

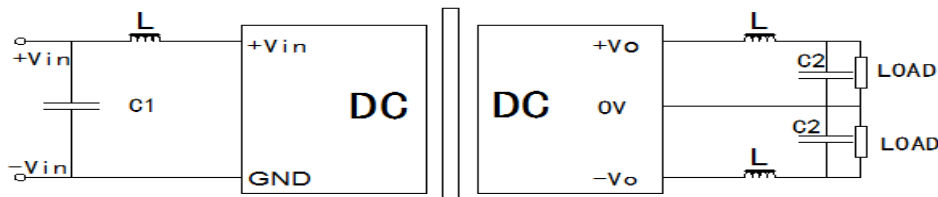
Note

Try To Avoid No-load Use: If the load power consumption is less than 10% of the rated output power of the module, it is recommended to connect a dummy load to the output terminal or select a module with a lower rated power. The dummy load (resistance) can be calculated by 10% of the rated power of the module, and the resistance value is $R=U_2 / (10\% \times 2W)$.

Avoid Excessive Output External Capacitance: The capacity value of the output external capacitor C2 should not be too large, otherwise it is easy to cause overcurrent or bad startup when the module is started. The specific value should be selected according to the external capacitor table.

The input of this series does not support parallel use of hot plug and output.

For situations requiring high ripple noise, external LC filter circuit should be connected, and the resonant frequency of LC filter should be far less than the switching frequency of DC/DC module to prevent mutual interference, resulting in output ripple increase or module damage, as shown in the figure:



Naming Logic Of Constant Voltage Products

B 05 05 LS Y - 1W R1

