

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/Non-stabilized
Positive and negative output

PRODUCT MODEL LIST

Order Code	Nominal Input Voltage (V)		Nominal Input Voltage		Efficiency [Typ] (%)	Capacitive Load [Max] (uF)
	Nominal	Range	Voltage (V)	Current (mA)		
E0503SY-2WR1	5	4.5~5.5	±3.3	±303	80	2200
E0505SY-2WR1			±5	±200	85	2200
E0509SY-2WR1			±9	±111	89	2200
E0512SY-2WR1			±12	±83	88	1000
E0515SY-2WR1			±15	±67	89	1000
E0524SY-2WR1			±24	±42	85	1000
E1203SY-2WR1	12	10.8~13.2	±3.3	±303	80	1000
E1205SY-2WR1			±5	±200	86	3300
E1209SY-2WR1			±9	±111	86	2200
E1212SY-2WR1			±12	±83	88	1000
E1215SY-2WR1			±15	±67	88	680
E1224SY-2WR1			±24	±42	87	680
E1505SY-2WR1	15	13.5~16.5	±5	±200	85	2200
E1515SY-2WR1			±15	±67	90	680
E2405SY-2WR1	24	21.6~26.4	±5	±200	86	2200
E2409SY-2WR1			±9	±111	86	2200
E2412SY-2WR1			±12	±83	90	1000
E2415SY-2WR1			±15	±67	89	1000
E2424SY-2WR1			±24	±42	85	1000

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

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Power		0.2		2	W
Line Voltage Regulation	Input voltage change ±1% at rated load		±1.2	±1.5	%
Load Regulation	Load varies from 10% to 100% at nominal input		10	15	
Quiescent Current	Output load is 0 at nominal input	E05XX	≤20		mA
		etc.	≤10		
Temps Drift Coefficient	Rated load			±0.03	%/
Ripple & Noise	At 20MHz bandwidth		50	100	mVp-p
Switching Frequency	Rated input voltage		280		KHz
Output Short Circuit Protection	Sustainable and automatic restoration				
Input Filter	Filter capacitor				

All Specifications Subject To Change Without Notice

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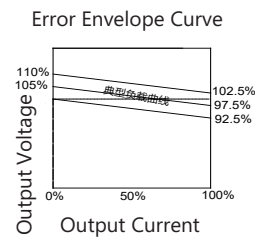
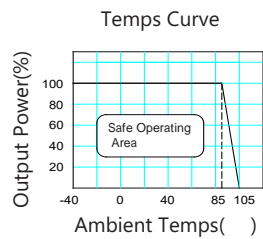
Hot Plug	Nonsupport
Output Voltage Accuracy	Refer to error envelope curve

Insulation Characteristic

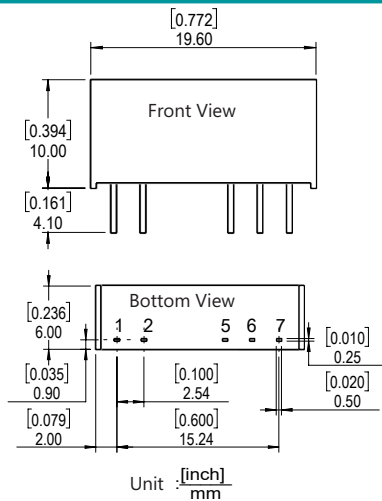
Parameter	Conditions	Min.	Typ.	Max.	Units
Insulation Resistance	500VDC	1000			M
Insulation Voltage	Test time 1 minute, leakage current less than 1 mA	3000			VDC

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			1.3		g
Cooling	Free air convection				
Case Material	Flame-retardant and heat-resistant plastic (UL94-V0)				



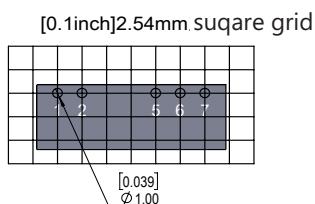
Shape & Pin Dimensions



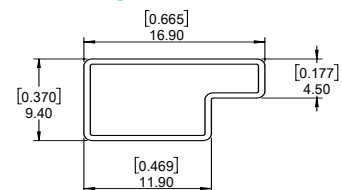
Pin	Function
1	Vin
2	GND
5	-Vo
6	0V
7	+Vo

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

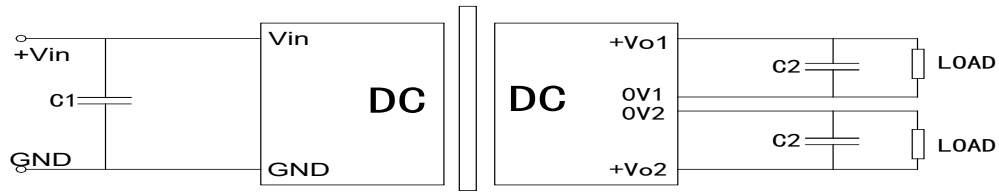
PCB



Package Dimensions



Basic Application Circuit



Options of C1、C2:

Input Voltage	External Capacitance	Output Voltage	External Capacitance
5VDC	4.7uF	±3.3/5VDC	4.7uF
12VDC	2.2uF	±9VDC	2.2uF
15VDC	2.2uF	±12/15VDC	1uF
24VDC	1uF	±24VDC	0.47uF

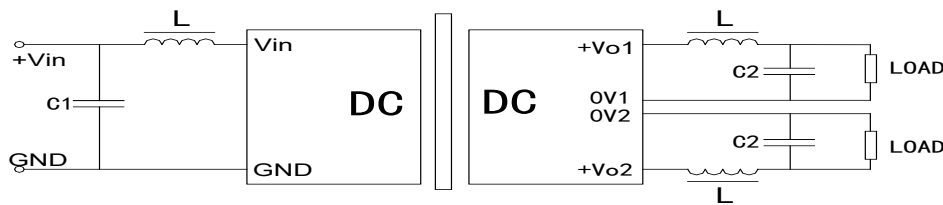
Note

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

