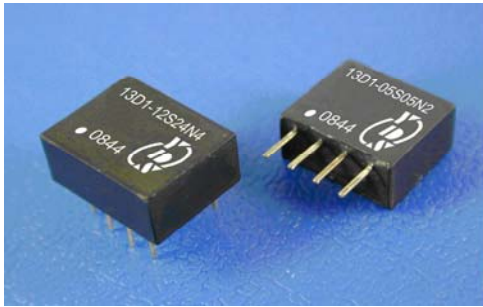




## 3000Vdc Isolation Single Output 1 Watt Dc-Dc Converter



### FEATURES:

- 4 PIN SIP and 8 PIN DIL Package.
- High insulation 3000Vdc.
- High Efficiency up to 85%.
- Unregulated Output Types.
- Internal SMD Construction    ● No External Component Required
- Operating Temperature: -40°C TO +85°C    ● Industry Standard Pinout



Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency	Package Style
	Vdc	mA	%TYP	"X"
13D1-XXS03NX	3.3	303	70	1/2/3/4
13D1-XXS05NX	5	200	70	1/2/3/4
13D1-XXS09NX	9	112	75	1/2/3/4
13D1-XXS12NX	12	84	78	1/2/3/4
13D1-XXS15NX	15	67	80	2/3/4
13D1-XXS24NX	24	42	82	2/3/4

Note: 1. "XX" Is Input Voltage: 03=3.3Vdc, 05=05Vdc, 09=09Vdc, 12=12Vdc, 15=15Vdc, 24=24Vdc.    2. Over 24Vdc input voltage, using the 3 package  
 3. The input voltage increases, there will be an increase in efficiency.

### Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom			±10	%
Filter	Capacitor				

### Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±5	%
Short Circuit Protection	Short Term			1 Sec	
Line Regulation	For 1.0% OF Vin		1.2		%
Load Regulation	3.3V & 5V (10% To 100% F.L)			15	%
Load Regulation	9V, 12V, 15V & 24V (10% To 100% F.L)			10	%
Ripple & Noise	BW=DC To 20MHz (Package 1)			150	mVp-p
Ripple & Noise	BW=DC To 20MHz (Package 2/3/4)			100	mVp-p
Transient response setting time	50% load step change		350		us

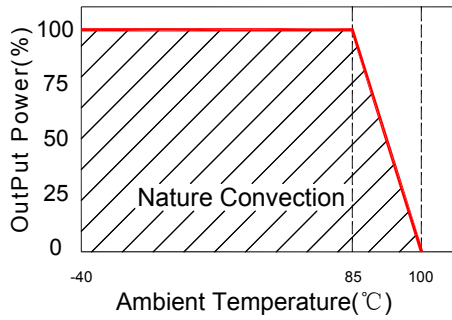
### General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input		100		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25°C	3500000			Hours
Weight	Package 1/2/3/4		1.1/1.5/1.9/1.9		g
Dimensions	Package 1		11.50x6.00x7.5		mm
Dimensions	Package 2		11.50x6.00x10.0		mm
Dimensions	Package 3		11.50x7.50x10.0		mm
Dimensions	Package 4		12.7x10.16x7.50		mm

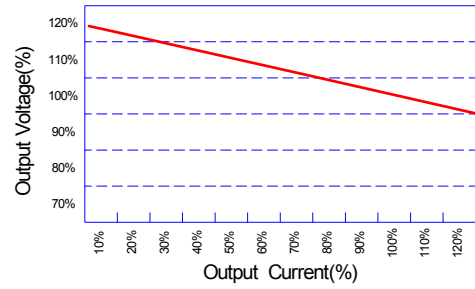


3000Vdc Isolation Single Output 1 Watt Dc-Dc Converter

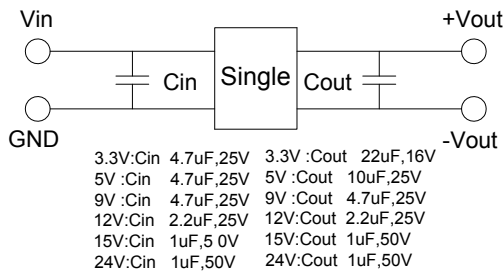
Temperature Derating Graph



Tolerance Envelope Graph



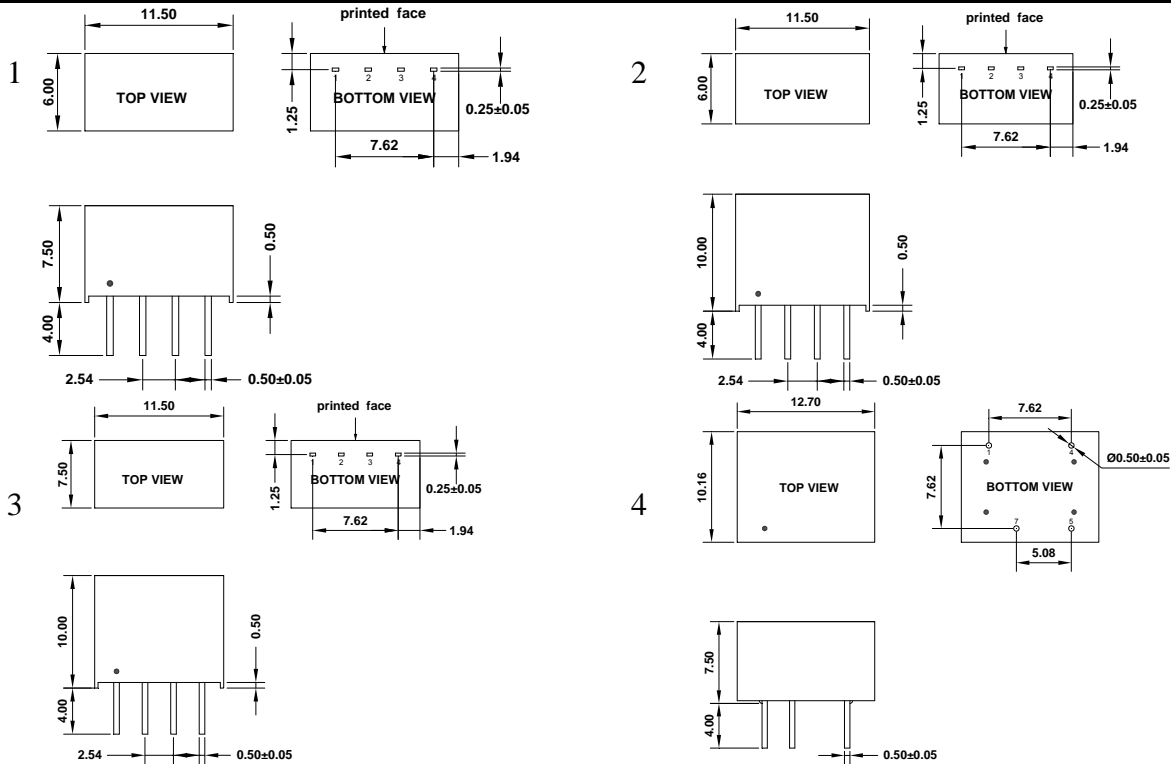
Recommended Test Circuit



Part Number

13D1 - 03 S 05 N 2  
 A B C D E F  
 A:Series  
 B:Input Voltage  
 C:Single Output  
 D:Output Voltage  
 E:Unregulated(N)  
 F:Package

Markings and dimensions



Unit:mm Unless otherwise specified, all tolerances are  $\pm 0.25$

PIN Connection

PIN	1	2	3	4	5	7
4IN	-Vin	+Vin	-Vout	+Vout		
8IN	-Vin			+Vin	+Vout	-Vout