



FEATURES :

- Small Footprint
- 14PIN SMD Package
- High Efficiency up to 80%
- Unregulated Output Types
- High Power Density
- 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
	Vdc	mA	%TYP
13DS3-XXS03NNL	3.3	303	65
13DS3-XXS05NNL	5	200	70
13DS3-XXS09NNL	9	111	75
13DS3-XXS12NNL	12	84	78
13DS3-XXS15NNL	15	67	80

Note:

- 1."XX" Is Input Voltage: 03=3.3Vdc,05=5Vdc,09=9Vdc,12=12Vdc,15=15Vdc.
2. 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 (10% To 100% F.L)		15		%
Load Regulation	5V,9V (10% To 100% F.L)			15&9.0	%
Load Regulation	12V,15V (10% To 100% F.L.)			7.5&7.0	%
Ripple & Noise	BW=DC To 20MHz			100	mVp-p
Transient response setting time	50% load step change		350		us

DC-DC Converter

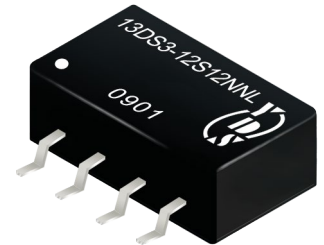
13DS3 SERIES

1Watt

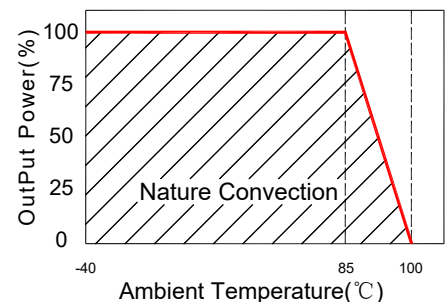
1KV Isolated

Single Output

SMD



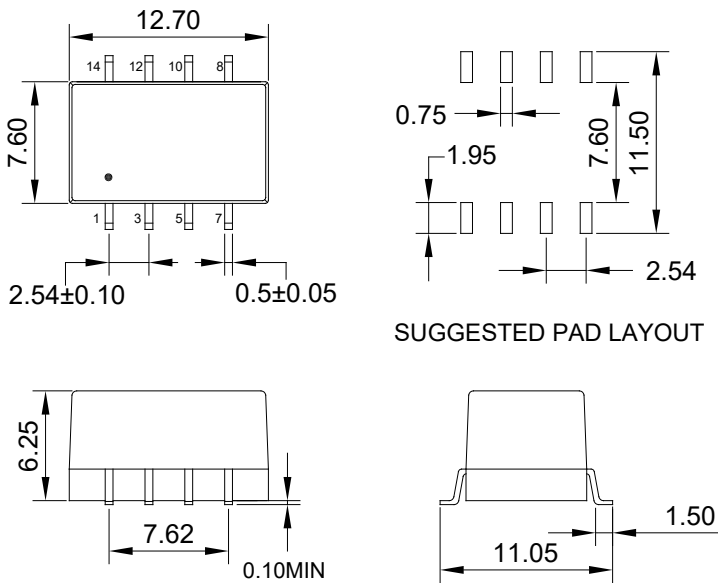
Temperature Derating Graph



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			1.2		g
Dimensions			12.7x7.6x6.25		mm

Markings and Dimensions

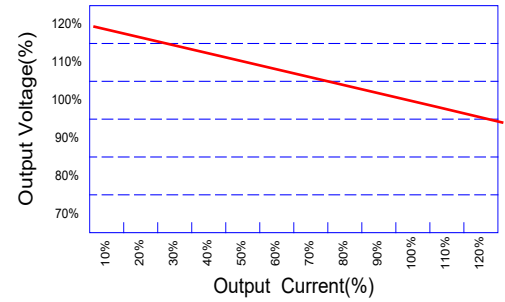


Unit : mm Unless otherwise specified, all tolerances are ±0.25

PIN Connection

PIN	1	3	7	8	Other
Single	-Vin	+Vin	-Vout	+Vout	NC

Tolerance Envelope Graph

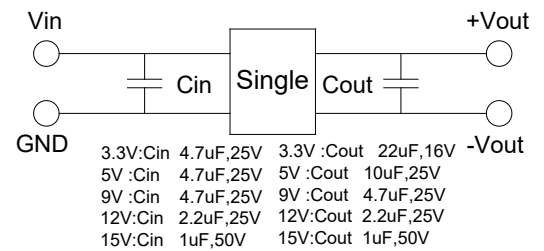


Part Number

13DS3 - 05 S 05 N NL
A B C D E F

- A:Series
- B:Input Voltage
- C:Single(S)
- D:Output Voltage
- E:Unregulated(N)
- F:RoHS Version

Recommended Test Circuit



3.3V:Cin 4.7uF,25V 3.3V :Cout 22uF,16V
 5V :Cin 4.7uF,25V 5V :Cout 10uF,25V
 9V :Cin 4.7uF,25V 9V :Cout 4.7uF,25V
 12V:Cin 2.2uF,25V 12V:Cout 2.2uF,25V
 15V:Cin 1uF,50V 15V:Cout 1uF,50V

