



1000Vdc Isolation 0.5 Watt Single Output Surface Mount Dc-Dc Converter



FEATURES:

- Small Footprint
- 14PIN SMD Package
- High Efficiency up to 78%
- Unregulated Output Types
- High Power Density
- No External Component Required
- Operating Temperature: -40°C TO +85°C
- Industry Standard Pinout

Preliminary



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
13DS-03S03N0.5W	3.3	150	65
13DS-03S05N0.5W	5	100	70
13DS-03S09N0.5W	9	56	70
13DS-03S12N0.5W	12	42	70
13DS-03S15N0.5W	15	33	70
13DS-05S03N0.5W	3.3	150	68
13DS-05S05N0.5W	5	100	70
13DS-05S09N0.5W	9	56	72
13DS-05S12N0.5W	12	42	72
13DS-05S15N0.5W	15	33	72
13DS-09S03N0.5W	3.3	150	70
13DS-09S05N0.5W	5	100	72
13DS-09S09N0.5W	9	56	72
13DS-09S12N0.5W	12	42	72
13DS-09S15N0.5W	15	33	72
13DS-12S03N0.5W	3.3	150	70
13DS-12S05N0.5W	5	100	70
13DS-12S09N0.5W	9	56	72
13DS-12S12N0.5W	12	42	72
13DS-12S15N0.5W	15	33	72
13DS-15S03N0.5W	3.3	150	70
13DS-15S05N0.5W	5	100	73
13DS-15S09N0.5W	9	56	75
13DS-15S12N0.5W	12	42	76
13DS-15S15N0.5W	15	33	78

Input Specifications

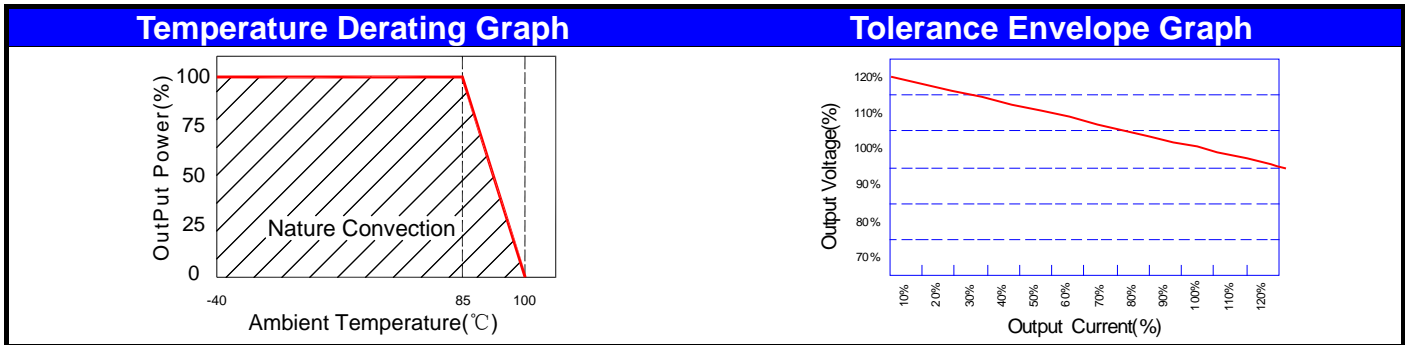
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom			±10	%
Filter	Capacitor				

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,15 V(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

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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			1.0		g
Dimensions			12.7X7.6X6.25		mm



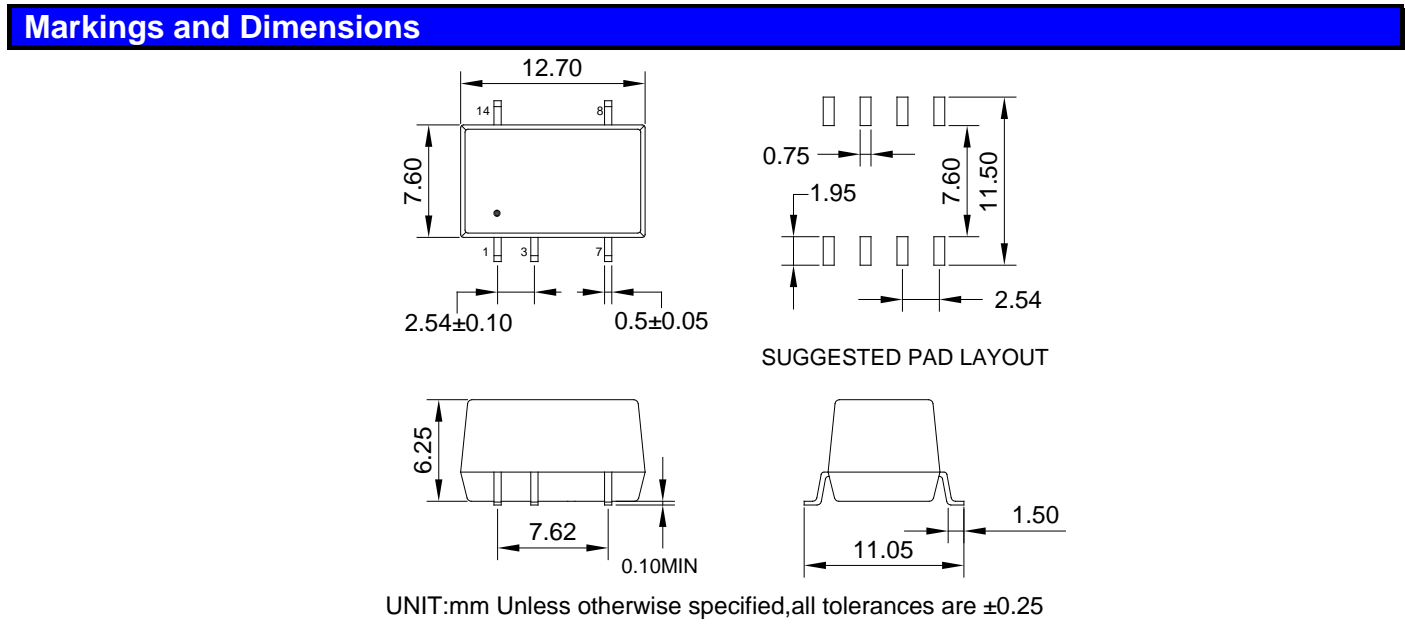
Recommended Test Circuit

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

Part Number

13DS - 05 S 05 N 0.5W
 A B C D E F

A:Series
 B:Input Voltage
 C:Single Output
 D:Output Voltage
 E:Unregulated(N)
 F:Output Power



PIN Connection					
Pin	1	3	7	8	14
Single	-Vin	+Vin	-Vout	+Vout	NC