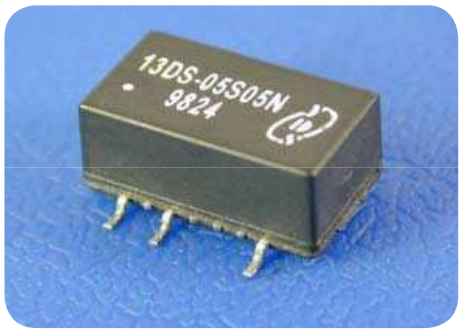
DC DC

Part Num

13DS SERIES

stadium POWER

1000Vdc Isolation 1 Watt Single Output Surface Mount Dc-Dc Converter



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

RoHS Compliant

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

Part Number	Output Voltage	Output Current	% EFF.
	Vdc	mA	%TYP
13DS-XXS03NNL	3.3	303	65
13DS-XXS05NNL	5	200	70
13DS-XXS09NNL	9	110	75
13DS-XXS12NNL	12	84	78
13DS-XXS15NNL	15	67	80

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom			±5	%
Filter	Capacitor				

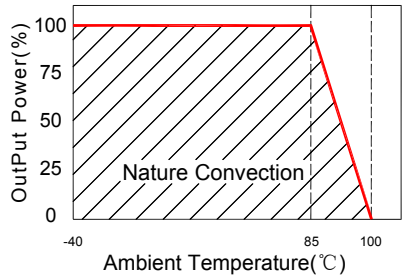
Output Specifications

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				us

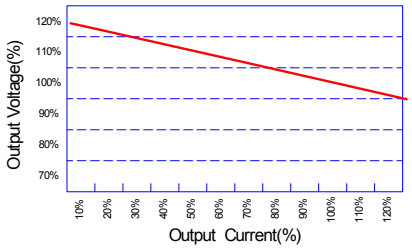
General Specifications

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□	3500000			Hours
Weight			1.0		g
Dimensions			12.7X7.6X6.25		mm

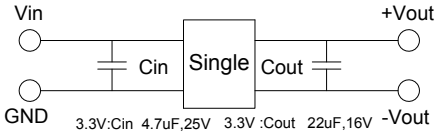
Temperature Derating Graph



Tolerance Envelope Graph



Recommended Test Circuit



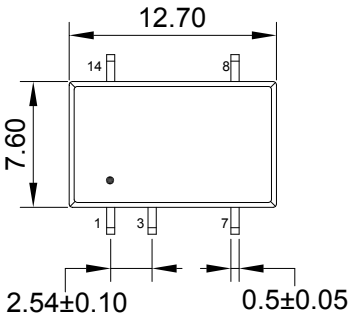
3.3V:Cin	4.7uF,25V	3.3V :Cout	22uF,16V
5V :Cin	4.7uF,25V	5V :Cout	10uF,25V
9V :Cin	4.7uF,25V	9V :Cout	4.7uF,25V
12V:Cin	2.2uF,25V	12V:Cout	2.2uF,25V
15V:Cin	1uF,50V	15V:Cout	1uF,50V

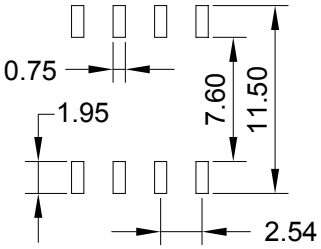
Part Number

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

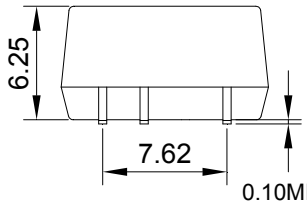
A:Series
B:Input Voltage
C:Single(S)
D:Output Voltage
E:Unregulated(N)
F:RoHS Version

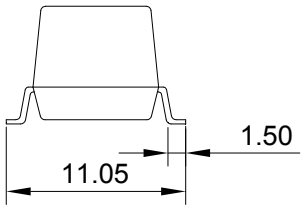
Markings and Dimensions





SUGGESTED PAD LAYOUT





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

PIN Connection

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