

3000Vdc Isolation Single & Dual Output 2 Watt Dc-Dc Converter



Features:

- Small Footprint
- 22PIN 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	% EFF.
	Vdc	mA	%TYP
13DS1-XXS05N2W	5	400	70
13DS1-XXS09N2W	9	222	75
13DS1-XXS12N2W	12	167	80
13DS1-XXS15N2W	15	133	80
13DS1-XXD05N2W	±5	±200	70
13DS1-XXD09N2W	±9	±111	75
13DS1-XXD12N2W	±12	±84	80
13DS1-XXD15N2W	±15	±67	80

Input Specifications

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

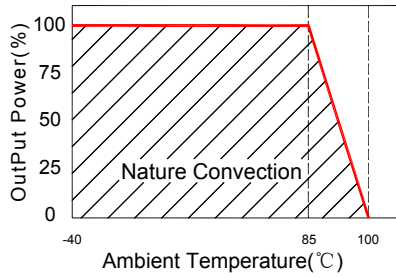
Output Specifications

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	5V,9V(10% To 100% F.L)			15	%
Load Regulation	12V,15 V(10% To 100% F.L)			10	%
Ripple & Noise	BW=DC To 20MHz			75	mVp-p
Transient response setting time	50% load step change		350		us

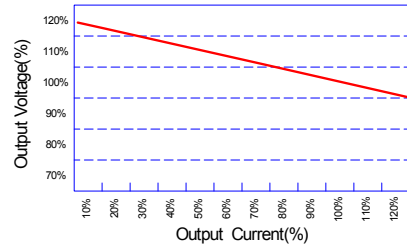
General Specifications

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			1.8		g
Dimensions			15.24x8.0x8.5		mm

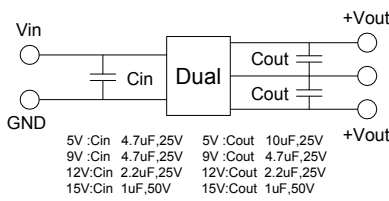
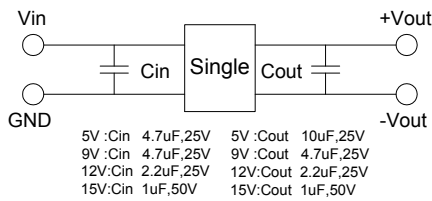
Temperature Derating Graph



Tolerance Envelope Graph



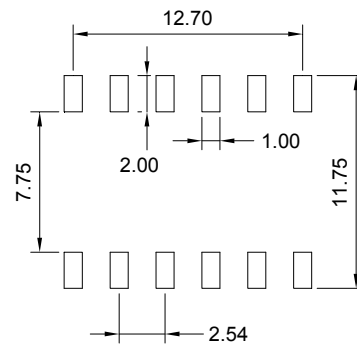
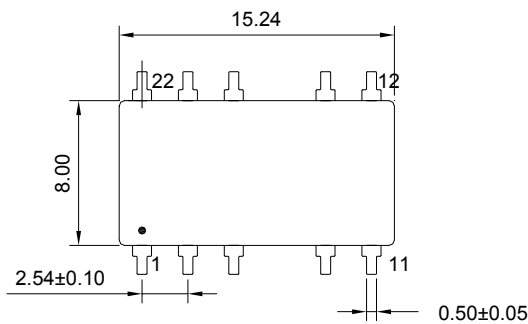
Recommended Test Circuit



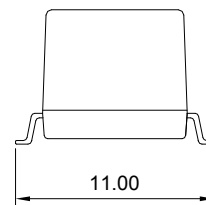
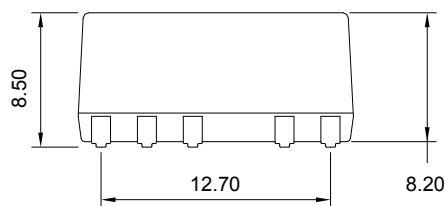
13DS1 - 05 S 05 N 2W
A B C D E F

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

Markings and Dimensions



SUGGESTED PAD LAYOUT



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

PIN Connection

Pin	1	3	5	9	11	12	14	18	20	22
Single	-Vin	+Vin	NC	-Vout	NC	NC	+Vout	NC	NC	NC
Dual	-Vin	+Vin	NC	Com	-Vout	NC	+Vout	NC	NC	NC