

MMT

A decorative blue wavy graphic that flows across the top of the page, starting from the left and curving towards the right.

DC/DC CONVERTER

A green leafy branch with several leaves and water droplets, positioned on the left side of the page.

0.5 Watt

A decorative green wavy graphic that flows across the bottom of the page, starting from the left and curving towards the right.

2019

<http://www.mmtmachrone.com>

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



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				

DC-DC Converter

13DS-0.5W SERIES

0.5Watt

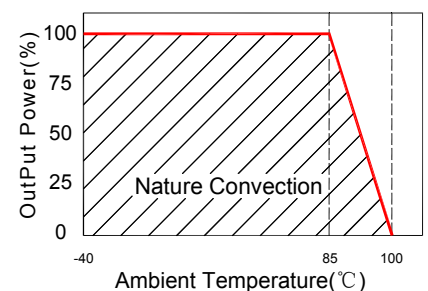
1KV Isolated

Single Output

SMD



Temperature Derating Graph



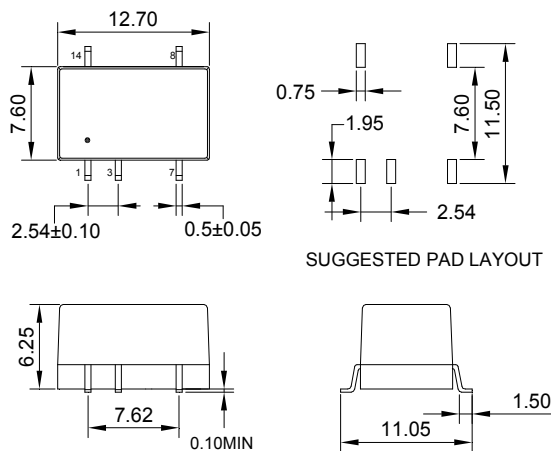
Output Specifications

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	50% load step change		350		us

General Specifications

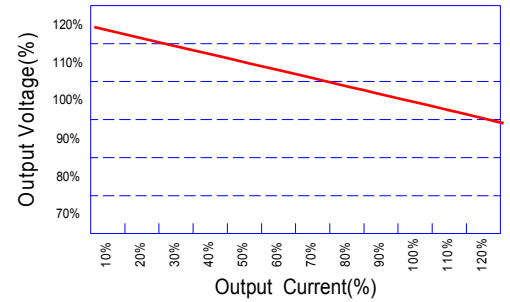
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input		100		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F @25°C	3500000			Hours
Weight			1.2		g
Dimensions			12.7x7.6x6.25		mm

Markings and dimensions



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

Tolerance Envelope Graph

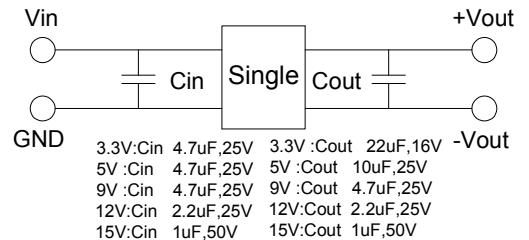


Part Number

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

Recommended Test Circuit



PIN Connection

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