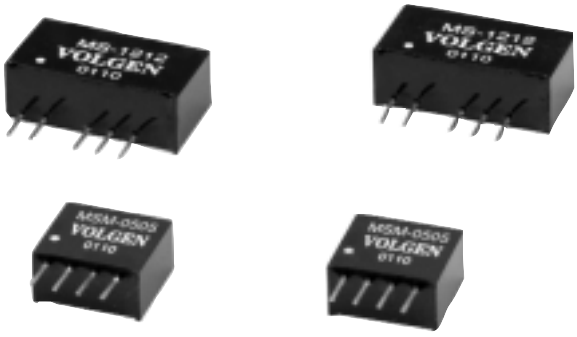
MS / MSM / MSB

1 WATT DC/DC CONVERTER, SIP PACKAGE



FEATURES

- *ECONOMY LINE*
- *7 PIN PACKAGE*
- *1000 VDC ISOLATION*
- *UNREGULATED OUTPUT*
- *UL 94V-0 PACKAGE MATERIAL*
- *3.3V ~ 24V INPUT MODELS*
- *ONE YEAR WARRANTY*

ELECTRICAL SPECIFICATIONS

All specifications are typical at nominal input, full load

INPUT SPECIFICATIONS

Input Voltage Range..... ±10%
Input Filter..... Capacitor

OUTPUT SPECIFICATIONS

Output Voltage Accuracy..... ±5%

Efficiency..... 75% typ.

Ripple .....100 mV_{p-p}

LineRegulation..... 1.2%/1% of V in

Line Filter..... Built-in

Load Regulation.....5V=15% max.
9V, 12V, 15V=10% max.

Spike Noise (DC to 100MHZ).....Input 150 mVp-p max.
Output 70 mVp-p max.

GENERAL SPECIFICATIONS

Isolation Voltage..... 1000 VDC

MTBF..... >1,000,000 hours

Isolation Resistance..... 1000M-ohms min. @ 500 VDC

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature .....-25˚C ~ +85˚C

Temperature Coefficient.....±0.05%/ ˚C

Humidity..... 30%~95% RH

Storage Temperature..... -55°C ~ +125°C

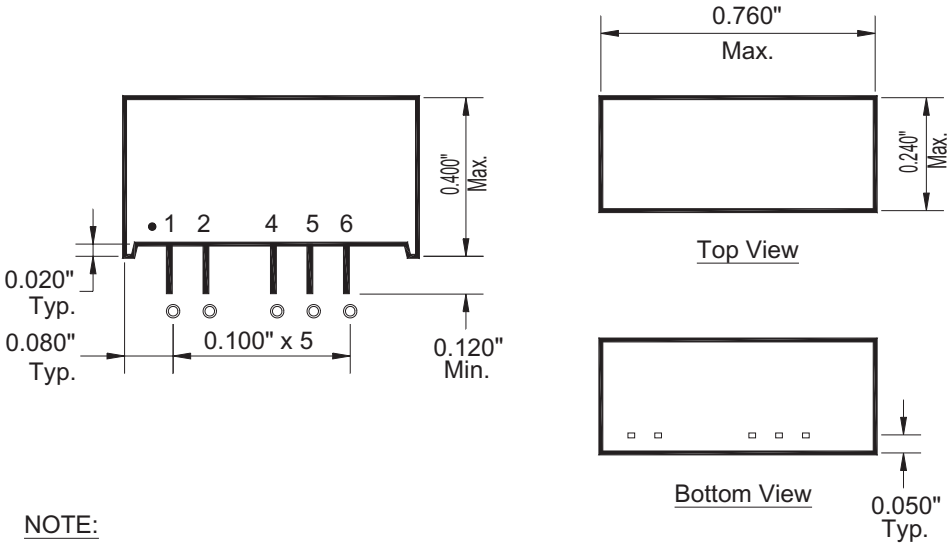
PHYSICAL SPECIFICATIONS

Case Material.....UL 94V-0 Plastic
Single In-Line Pin Configuration

Series

PART NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFFICIENCY
MSB - 0505	5 VDC	5 VDC	200 mA	70 %
MSB - 0509		9 VDC	111 mA	75 %
MSB - 0512		12 VDC	84 mA	80 %
MSB - 0515		15 VDC	66 mA	82 %
MS - 0505D		±5 VDC	±100 mA	70 %
MS - 0509D		±9 VDC	±56 mA	75 %
MS - 0512D		±12 VDC	±42 mA	78 %
MS - 0515D		±15 VDC	±33 mA	80 %
MSB - 1205	12 VDC	5 VDC	200 mA	70 %
MSB - 1209		9 VDC	111 mA	75 %
MSB - 1212		12 VDC	84 mA	80 %
MSB - 1215		15 VDC	66 mA	82 %
MS - 1205D		±5 VDC	±100 mA	70 %
MS - 1209D		±9 VDC	±56 mA	75 %
MS - 1212D		±12 VDC	±42 mA	78 %
MS - 1215D		±15 VDC	±33 mA	80 %
MSB - 1505	1 5 VDC	5 VDC	200 mA	70 %
MSB - 1509		9 VDC	111 mA	75 %
MSB - 1512		12 VDC	84 mA	80 %
MSB - 1515		15 VDC	66 mA	82 %
MS - 1505D		±5 VDC	±100 mA	70 %
MS - 1509D		±9 VDC	±56 mA	75 %
MS - 1512D		±12 VDC	±42 mA	78 %
MS - 1515D		±15 VDC	±33 mA	80 %
MSB - 2405	24 VDC	5 VDC	200 mA	70 %
MSB - 2409		9 VDC	111 mA	75 %
MSB - 2412		12 VDC	84 mA	80 %
MSB - 2415		15 VDC	66 mA	82 %
MS - 2405D		±5 VDC	±100 mA	70 %
MS - 2409D		±9 VDC	±56 mA	75 %
MS - 2412D		±12 VDC	±42 mA	78 %
MS - 2415D		±15 VDC	±33 mA	80 %

MSB= Single Output
MS= Dual Output



NOTE:

*TERMINAL 0.020" x 0.010" FLAT PIN

MS / MSB SERIES

Pin Connections

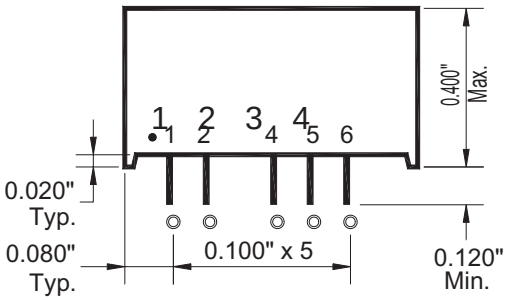
PIN	MSB	MS
1	+INPUT	+INPUT
2	-INPUT	-INPUT
4	-OUTPUT	-OUTPUT
5	NO PIN	COMMON
6	+OUTPUT	+OUTPUT

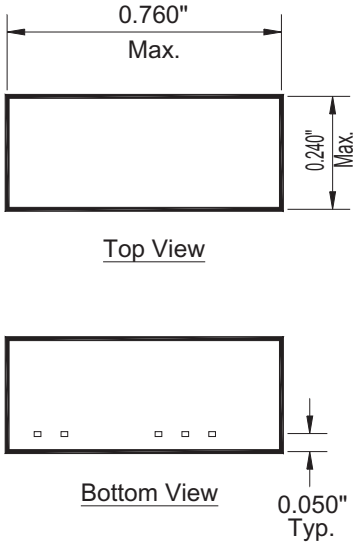
NOTE:

All specifications typical and nominal / full load and 25˚C unless otherwise noted.
Avoid sustained operation in overload or dead short conditions.
Specifications subject to changes without notice.

PART NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFFICIENCY
MSM - 0305	3.3 VDC	5 VDC	100 mA	70 %
MSM - 0309		9 VDC	56 mA	70 %
MSM - 0312		12 VDC	42 mA	72 %
MSM - 0315		15 VDC	33 mA	75 %
MSM - 0503	5 VDC	3.3 VDC	152 mA	70 %
MSM - 0505		5 VDC	200 mA	70 %
MSM - 0509		9 VDC	111 mA	75 %
MSM - 0512		12 VDC	84 mA	78 %
MSM - 0515		15 VDC	66 mA	80 %
MSM - 1205	12VDC	5 VDC	200 mA	70 %
MSM - 1209		9 VDC	111 mA	75 %
MSM - 1212		12 VDC	84 mA	78 %
MSM - 1215		15 VDC	66 mA	80 %
MSM - 1505	15 VDC	5 VDC	200 mA	70 %
MSM - 1509		9 VDC	111 mA	75 %
MSM - 1512		12 VDC	84 mA	78 %
MSM - 1515		15 VDC	66 mA	80 %
MSM - 2405	24 VDC	5 VDC	200 mA	70 %
MSM - 2409		9 VDC	111 mA	75 %
MSM - 2412		12 VDC	84 mA	78 %
MSM - 2415		15 VDC	66 mA	80 %

MSM - Single Output





MSM SERIES

Pin Connections	
Pin#	Single
1	GND
2	VCC
3	OV
4	+V

NOTE:

*TERMINAL 0.020" x 0.010" FLAT PIN

NOTE:

All specifications typical and nominal / full load and 25˚C unless otherwise noted.
Avoid sustained operation in overload or dead short conditions.
Specifications subject to changes without notice.