

## FEATURES

- 1000VDC ISOLATION
- EFFICIENCY UP TO 82%
- INTERNAL SMD TECHNOLOGY
- LOW COST
- NO HEATSINK REQUIRED
- UP TO 1W UNREGULATED OUTPUT POWER
- SINGLE IN LINE PACKAGE
- 100% BURNED IN
- MTBF > 2,000,000 HOURS



### ● OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.03%/°C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation <sup>1</sup>	+/-1.2% max
Load Regulation <sup>2</sup>	+/-8% max
Short Circuit Protection	Momentary

### ● ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55°C to +125°C
Cooling	Free-Air Convection

*ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD , AND 25 °C UNLESS OTHERWISE NOTED.*

### ● INPUT SPECIFICATIONS

Input Voltage Range	+/-10% max
Input Filter	Capacitor Type

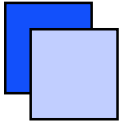
### ● GENERAL SPECIFICATIONS

Efficiency	70%-82%
Isolation Voltage <sup>3</sup>	1000 VDC min
Isolation Resistance	10 <sup>9</sup> ohms min
Switching Frequency	100 KHz min
Isolation Capacitance	80pF max
MTBF	2,000,000 Hours
Weight	1.3g Typ
Case Material	Non-Conductive Plastic
Case Size	11.6mm*6.1mm*10.2mm 11.6mm*7.6mm*10.2mm

<sup>1</sup> Line Regulation is for a 1.0% change in input Voltage.

<sup>2</sup> Load Regulation is for output load current change from 20% to 100%.

<sup>3</sup> For 60 seconds



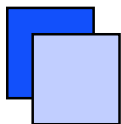
# DC-DC Converter UNIT

MU Series ( 1 W UNREGULATED DC-DC CONVERTER )

## ● SELECTION GUIDE 1W OUTPUT

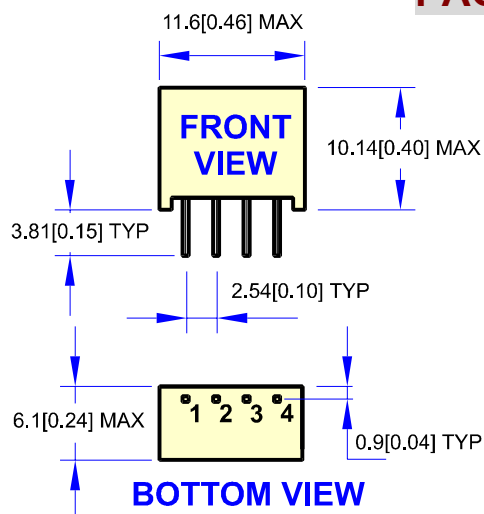
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
MUS-0505	5	5	200	274	26	73	1000	A
MUS-0509	5	9	110	260	27	77	1000	A
MUS-0512	5	12	84	253	26	79	1000	A
MUS-0515	5	15	67	253	28	79	1000	A
MUS-1203.3	12	3.3	300	112	11	74	1000	B
MUS-1205	12	5	200	112	11	74	1000	A
MUS-1209	12	9	110	105	11	79	1000	A
MUS-1212	12	12	84	102	11	82	1000	A
MUS-1215	12	15	67	102	12	82	1000	A
MUS-2403.3	24	3.3	300	57	8	73	1000	B
MUS-2405	24	5	200	57	8	73	1000	B
MUS-2409	24	9	110	54	8	77	1000	B
MUS-2412	24	12	84	54	8	77	1000	B
MUS-2415	24	15	67	52	7	80	1000	B

*Note: Other input to output voltages may be available. Please contact factory.*



## ● MECHANICAL DIMENSIONS

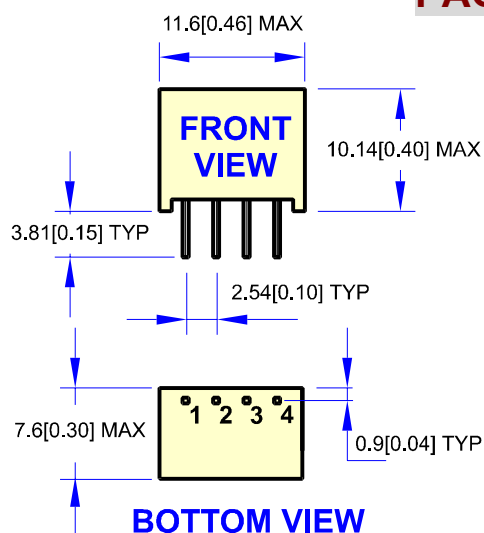
### PACKAGE "A"



PIN	SINGLE
1	-Vin
2	+Vin
3	-Vout
4	+Vout

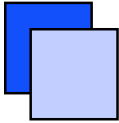
All dimensions are in mm[inches]

### PACKAGE "B"



PIN	SINGLE
1	-Vin
2	+Vin
3	-Vout
4	+Vout

All dimensions are in mm[inches]

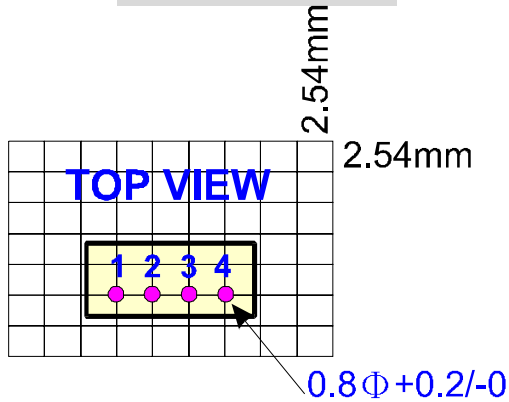


# DC-DC Converter UNIT

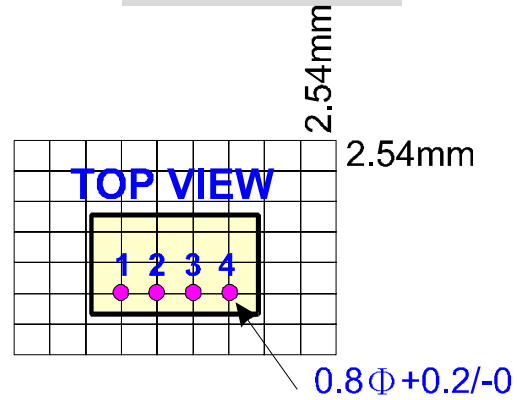
MU Series ( 1 W UNREGULATED DC-DC CONVERTER )

## ● RECOMMENDED FOOTPRINT DETAILS

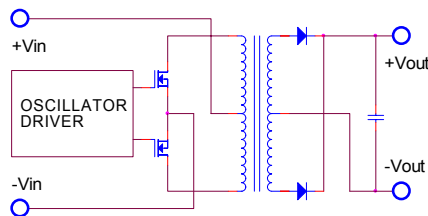
### PACKAGE "A"



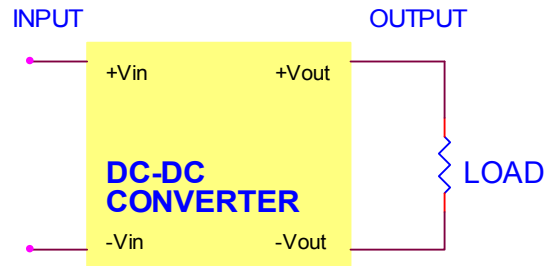
### PACKAGE "B"



## ● SIMPLIFIED SCHEMATIC



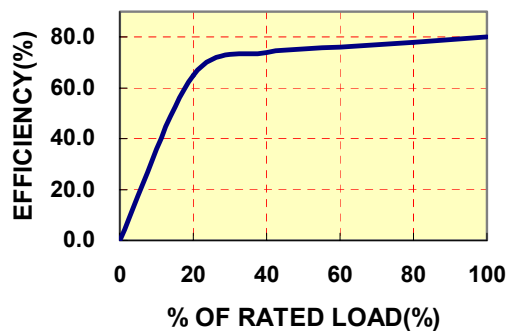
## ● TYPICAL APPLICATIONS



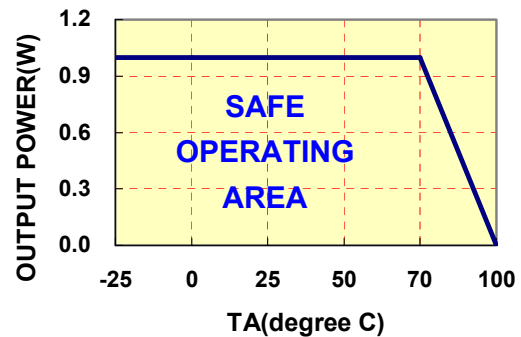
## ● TYPICAL PERFORMANCE CURVES

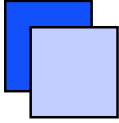
Specifications typical at  $t_a=25^\circ\text{C}$ , nominal input voltage, rated output current unless otherwise specified.

### EFFICIENCY VS LOAD



### DERATING CURVE





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## **MU SERIES APPLICATION NOTES:**

### **EXTERNAL CAPACITANCE REQUIREMENTS:**

*Output filtering is required for operation. A minimum of 10uF is needed. Output capacitance may be increased for additional filtering, not to exceed 220uF.*

*To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250KHz is required.*

### **Negative Outputs:**

*A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting -OUT as the negative output.*

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### **FOR MORE INFORMATION CALL:**

#### ***Power Systems – The Power Solution***

Ilsfeld-Auenstein ( Germany ) Dörnet 8    Tel: + 49 / 70 62 / 67 59 – 6    Fax: + 49 / 70 62 / 67 59 -80

E-mail: [Info@Power-Systems.de](mailto:Info@Power-Systems.de)

Home Page: [www.Power-Systems.de](http://www.Power-Systems.de)

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