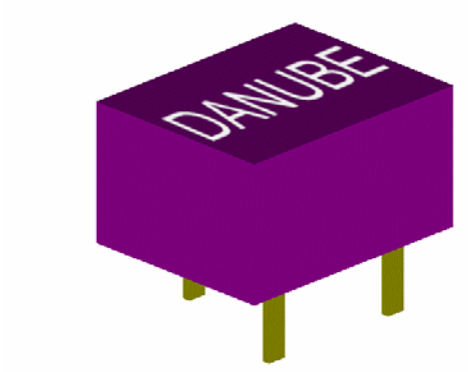
MBU Series (1.25 W UNREGULATED DC-DC CONVERTER)

FEATURES

- 1000VDC ISOLATION
- EFFICIENCY UP TO 82%
- INTERNAL SMD TECHNOLOGY
- LOW COST
- NO HEATSINK REQUIRED
- UP TO 1.25W UNREGULATED OUTPUT POWER
- DUAL 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[1]	+/-1.2% max
Load Regulation[2]	+/-8% max
Short Circuit Protection	Momentary

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +85 °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[3]	1000 VDC min
Isolation Resistance	10^9 ohms min
Switching Frequency	100 KHz min
Isolation Capacitance	80pF max
MTBF	2,000,000 Hours
Weight	1.7g Typ
Case Material	Non-Conductive Plastic
Case Size	12.7mm*10.16mm*7.62mm

[1] *Line Regulation is for a 1.0% change in input Voltage.*

[2] *Load Regulation is for output load current change from 20% to 100%.*

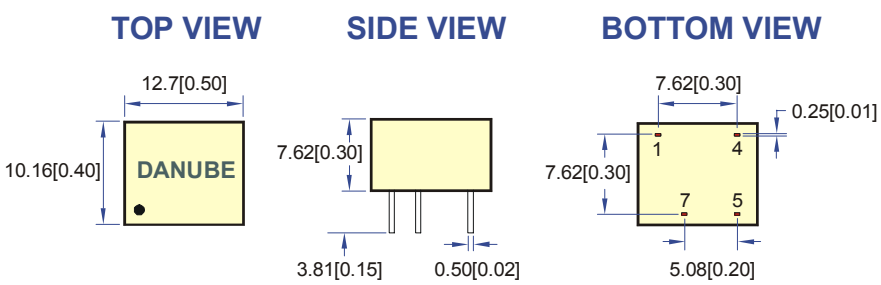
[3] *For 10 seconds*

SELECTION GUIDE
1.25W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
MBUS-0505	5	5	250	335	30	75	1000
MBUS-0509	5	9	140	335	30	75	1000
MBUS-0512	5	12	104	315	30	79	1000
MBUS-0515	5	15	84	310	30	81	1000
MBUS-1205	12	5	250	135	12	77	1000
MBUS-1209	12	9	140	135	12	77	1000
MBUS-1212	12	12	104	130	12	80	1000
MBUS-1215	12	15	84	130	12	80	1000
MBUS-2405	24	5	250	68	10	77	1000
MBUS-2409	24	9	140	68	10	77	1000
MBUS-2412	24	12	104	65	10	80	1000
MBUS-2415	24	15	84	65	10	80	1000
MBUS-4805	48	5	250	34	6	77	1000
MBUS-4809	48	9	140	34	6	77	1000
MBUS-4812	48	12	104	33	6	79	1000
MBUS-4815	48	15	84	33	6	79	1000

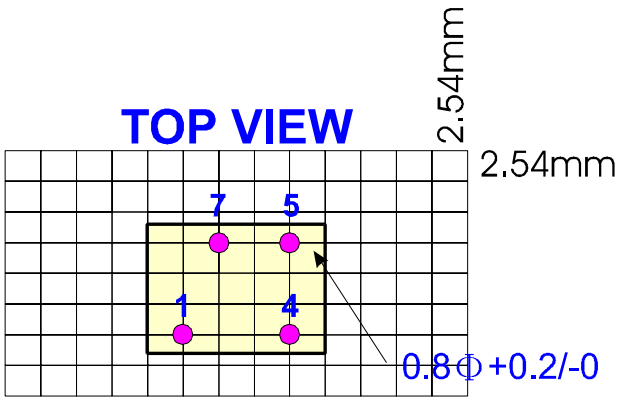
Note: Other input to output voltages may be available. Please contact factory.

MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

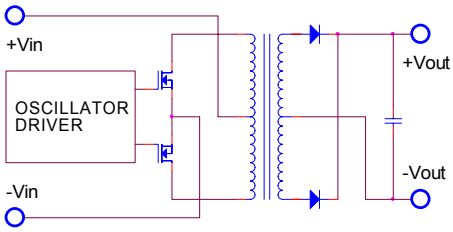


PIN	SINGLE
1	-Vin
4	+Vin
5	+Vout
7	-Vout

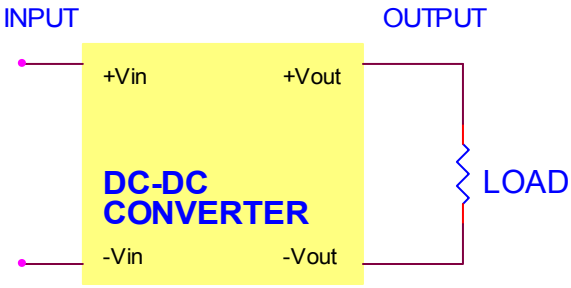
All dimensions are in mm[inches]



SIMPLIFIED SCHEMATIC



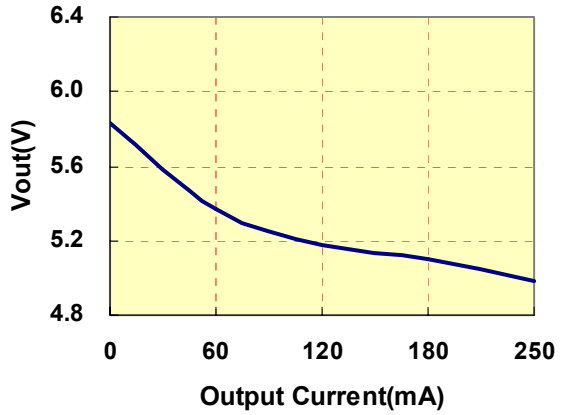
TYPICAL APPLICATIONS



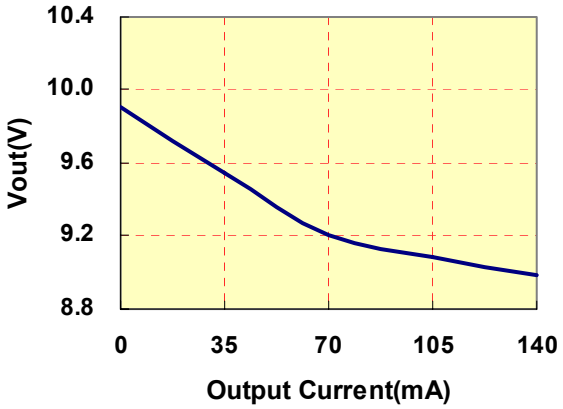
● TYPICAL PERFORMANCE CUREVES

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

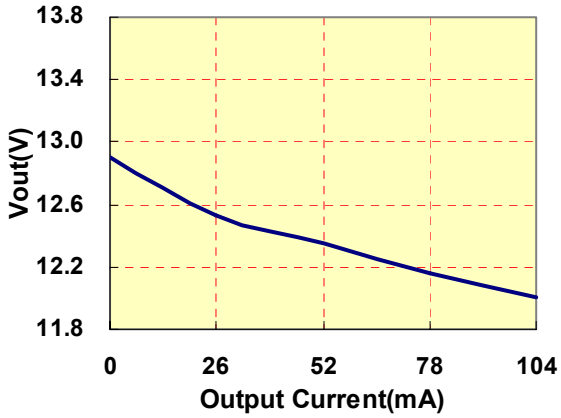
VOUT VS LOAD(5Vout Models)



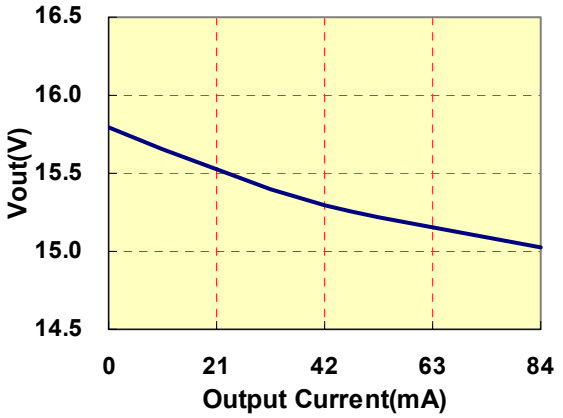
VOUT VS LOAD(9Vout Models)



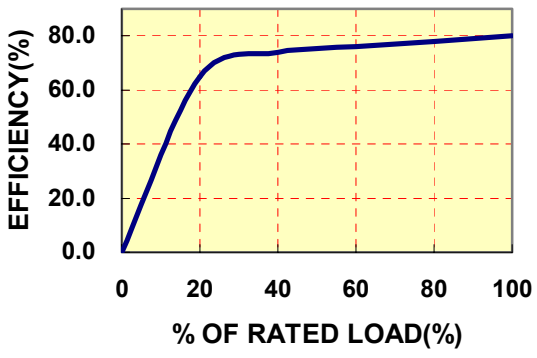
VOUT VS LOAD(12Vout Models)



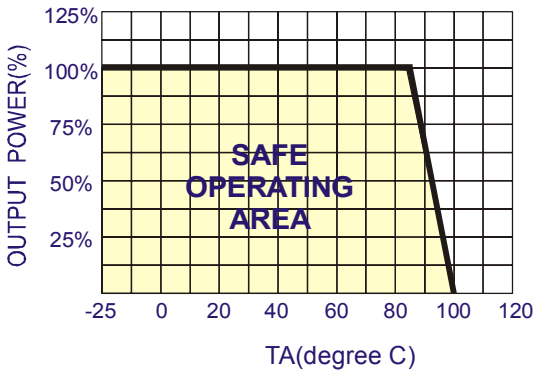
VOUT VS LOAD(15Vout Models)



EFFICIENCY VS LOAD



DERATING CURVE



MBU 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.

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 Home Page: www.Power-Systems.de