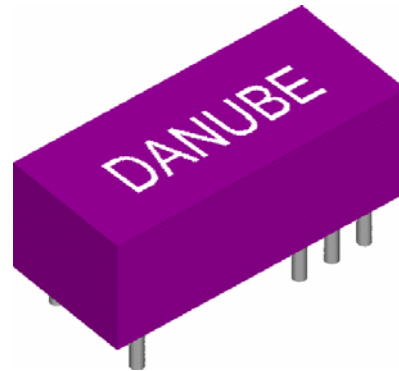


DC-DC Converter UNIT

SU Series (0,5W TO 1W UNREGULATED DC-DC CONVERTER)

FEATURES

- 1000VDC ISOLATION
- EFFICIENCY UP TO 83%
- INTERNAL SMD TECHNOLOGY
- LOW COST
- NO HEATSINK REQUIRED
- UP TO 1W 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 +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

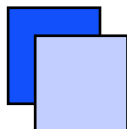
● GENERAL SPECIFICATIONS

Efficiency	70%-83%
Isolation Voltage ³	1000 VDC min
Isolation Resistance	10 ⁹ ohms min
Switching Frequency	50 KHz min
Isolation Capacitance	80pF max
MTBF	2,000,000 Hours
Weight	3.1g Typ
Case Material	Non-Conductive Plastic
Case Size	22.6mm*9.9mm*8.4mm

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 60 seconds

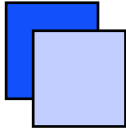


DC-DC Converter UNIT

SU Series (0,5W TO 1W UNREGULATED DC-DC CONVERTER)

● SELECTION GUIDE 0.5W-1W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)	OUTPUT POWER (Watt)
				FULL LOAD	NO LOAD			
SUS-0505-1	5	5	100	135	11	74	1000	0.5W
SUS-0509-1	5	9	56	133	14	75	1000	0.5W
SUS-0512-1	5	12	42	127	14	79	1000	0.5W
SUS-0515-1	5	15	34	130	15	77	1000	0.5W
SUS-1205-1	12	5	100	55	6	76	1000	0.5W
SUS-1209-1	12	9	56	52	5	80	1000	0.5W
SUS-1212-1	12	12	42	50	5	83	1000	0.5W
SUS-1215-1	12	15	34	50	5	83	1000	0.5W
SUS-2405-1	24	5	100	28	3	74	1000	0.5W
SUS-2409-1	24	9	56	25	3	83	1000	0.5W
SUS-2412-1	24	12	42	25	3	83	1000	0.5W
SUS-2415-1	24	15	34	25	3	83	1000	0.5W
SUS-4805-1	48	5	100	14	2	74	1000	0.5W
SUS-4809-1	48	9	56	13	2	80	1000	0.5W
SUS-4812-1	48	12	42	13	2	80	1000	0.5W
SUS-4815-1	48	15	34	13	2	80	1000	0.5W
SUS-0505-2	5	5	200	274	21	73	1000	1W
SUS-0509-2	5	9	111	268	20	75	1000	1W
SUS-0512-2	5	12	84	255	20	78	1000	1W
SUS-0515-2	5	15	67	253	20	79	1000	1W
SUS-1205-2	12	5	200	112	11	74	1000	1W
SUS-1209-2	12	9	111	105	10	79	1000	1W
SUS-1212-2	12	12	84	102	10	82	1000	1W
SUS-1215-2	12	15	67	102	10	82	1000	1W
SUS-2405-2	24	5	200	58	10	72	1000	1W
SUS-2409-2	24	9	111	52	6	80	1000	1W
SUS-2412-2	24	12	84	50	5	83	1000	1W
SUS-2415-2	24	15	67	50	5	83	1000	1W
SUS-4805-2	48	5	200	28	3	74	1000	1W
SUS-4809-2	48	9	111	27	3	77	1000	1W
SUS-4812-2	48	12	84	25	3	83	1000	1W
SUS-4815-2	48	15	67	25	2	83	1000	1W



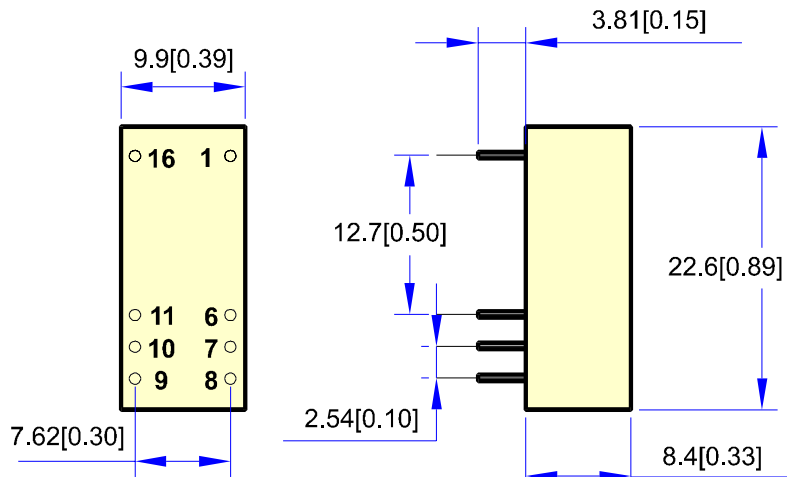
DC-DC Converter UNIT

SU Series (0,5W TO 1W UNREGULATED DC-DC CONVERTER)

MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

BOTTOM VIEW

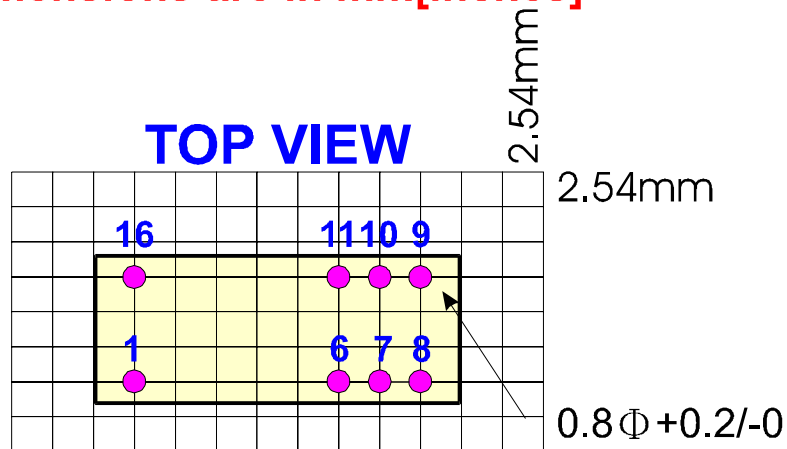
SIDE VIEW



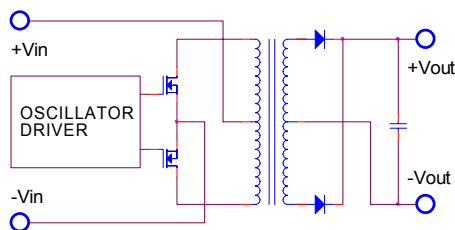
PIN	SINGLE
1 & 16	+Vin
6 & 11	-Vout
7 & 10	+Vout
8 & 9	-Vin

All dimensions are in mm[inches]

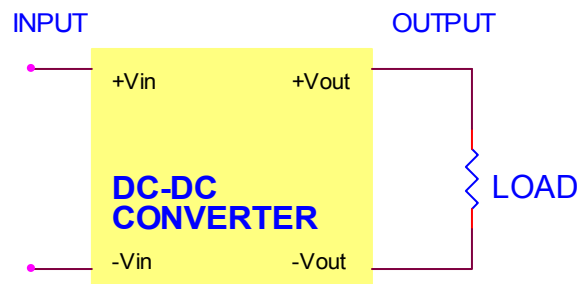
TOP VIEW

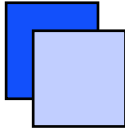


SIMPLIFIED SCHEMATIC



TYPICAL APPLICATIONS





DC-DC Converter UNIT

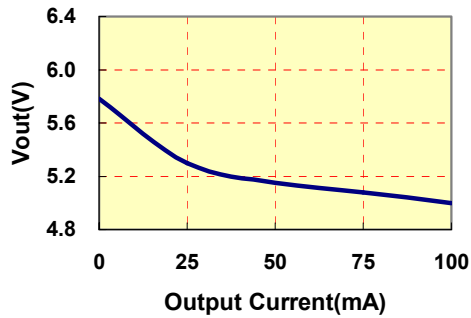
SU Series (0,5W TO 1W UNREGULATED DC-DC CONVERTER)

● TYPICAL PERFORMANCE CUREVES

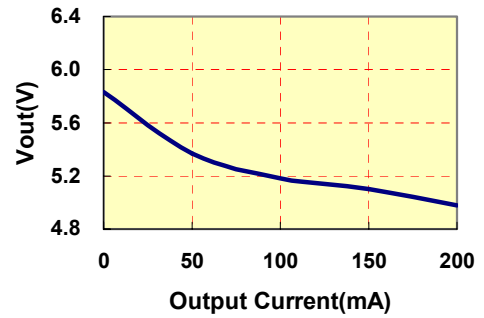
Specifications typical at $t_a=25^{\circ}\text{C}$, nominal input voltage , rated output current unless otherwise specified.

VOUT VS LOAD(5Vout Models)

OUTPUT POWER:0.5W

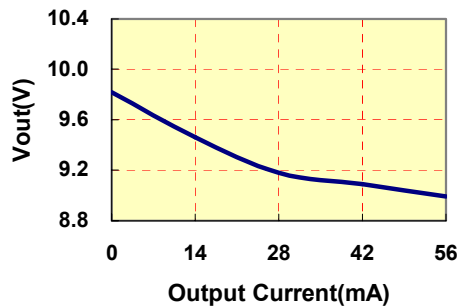


OUTPUT POWER:1W

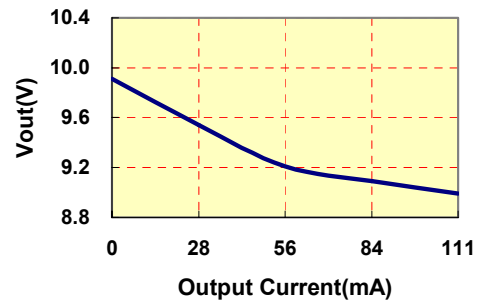


VOUT VS LOAD(9Vout Models)

OUTPUT POWER:0.5W

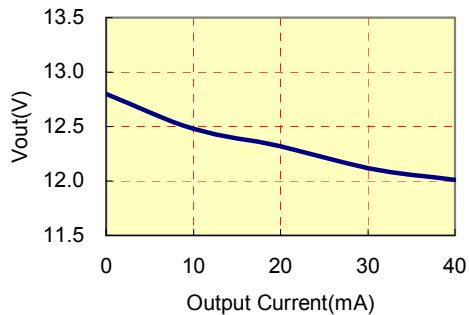


OUTPUT POWER:1W

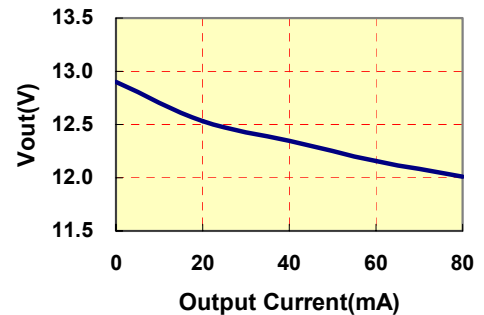


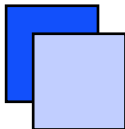
VOUT VS LOAD(12Vout Models)

OUTPUT POWER:0.5W



OUTPUT POWER:1W



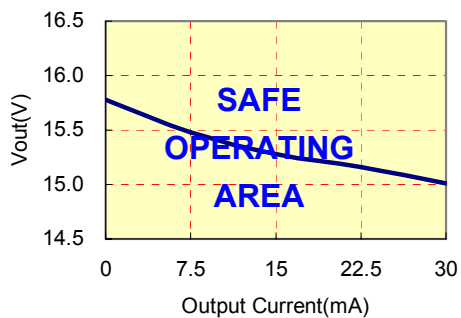


DC-DC Converter UNIT

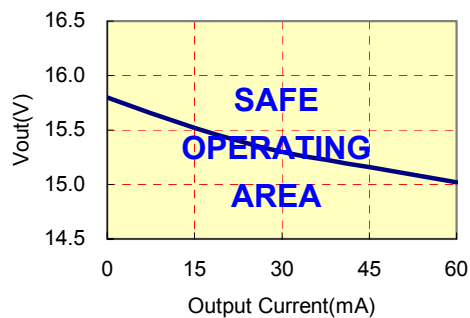
SU Series (0,5W TO 1W UNREGULATED DC-DC CONVERTER)

VOUT VS LOAD(15Vout Models)

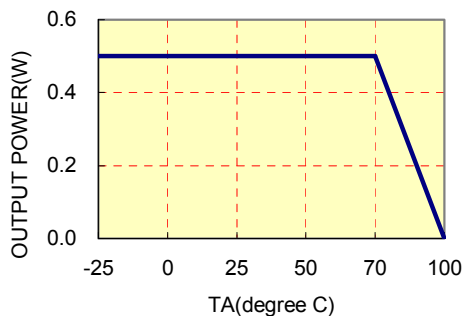
OUTPUT POWER:0.5W



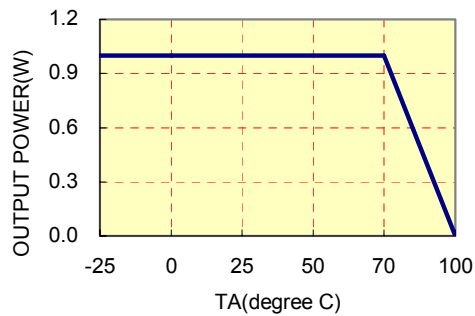
OUTPUT POWER:1W



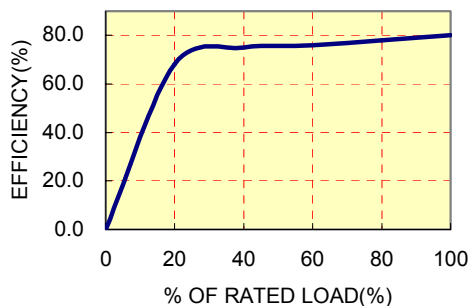
OUTPUT POWER:0.5W
DERATING CURVE

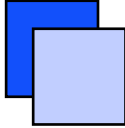


OUTPUT POWER:1W
DERATING CURVE



EFFICIENCY VS LOAD





DC-DC Converter UNIT

SU Series (0,5W TO 1W UNREGULATED DC-DC CONVERTER)

SU 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 0.5ohm 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:

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Fax: + 49 / 70 62 / 67 59 -80

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Home Page: www.Power-Systems.de
