TU SERIES

1W UNREGULATED

AvivEnergy tech ltd.

FEATURES

- DUAL IN LINE PACKAGE
- 1W UNREGULATED OUTPUT POWER
- 100% BURNED IN
- HIGH EFFICIENCY
- INTERNAL SMD TECHNOLOGY
- LOW COST
- NO HEATSINK REQUIRED
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- 1000VDC ISOLATION
- RoHS COMPLIANT
- 3 YEARS WARRANTY

RoHS COMPLIANT

OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.05%/ °C
Ripple & Noise(20MHz BW)[1]	100mVp-p max
Line Regulation[2]	+/-1.2% max
Load Regulation[3]	+/-8% max
Minimum Load	10% of Full Load
Short Circuit Protection	Momentary
Transient Response[5]	100uS max

INPUT SPECIFICATIONS

Input Voltage Range	+/-10% max
Input Filter	Capacitor Typ
Protection	Fuse Recommended
Input Reflected Ripple Current	50mAp-p max

GENERAL SPECIFICATIONS

Efficiency	70%-82%
Isolation Voltage[4]	1000 VDC min
Isolation Resistance	10^9 ohms min
Isolation Capacitance	80pF max
Switching Frequency	50KHz min
MTBF[6]	>2,000,000 Hours
Weight	2.2g Typ
Case Material	Non-Conductive Plastic
Case Size	20.3mm*10.2mm*7.1mm
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55 °C to +125°C
Humidity	95% max
Cooling	Free-Air Convection

[1] *Measured with 1uF ceramic capacitor connect to the output pins.*
[2] *Line Regulation is for a 1.0% change in input Voltage.*
[3] *Load Regulation is for output load current change from 20% to 100%.*
[4] *For 10 seconds.*
[5] *25% Step Load Change.*
[6] *MIL-HDBK-217F @25 °C , Ground Benign.*

Tel: 03-90 22 500 Fax: 03-90 22 400 Web: www.avivenergy.co.il Email: nrg@avivenergy.co.il

TU SERIES

1W UNREGULATED

AvivEnergy tech ltd.

SELECTION GUIDE
1W OUTPUT

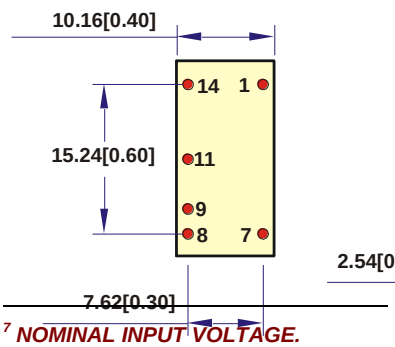
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT[7] CURRENT(mA)		EFF (%)[8]	PACKAGE
				FULL LOAD	NO LOAD		
TUS-0505 (A or B)	5	5	200	274	26	73	A or B
TUS-0512 (A or B)	5	12	84	253	26	79	A or B
TUS-0515 (A or B)	5	15	67	253	28	79	A or B
TUD-0505A	5	+/-5	+/-100	274	26	73	A
TUD-0512A	5	+/-12	+/-42	253	26	79	A
TUD-0515A	5	+/-15	+/-34	253	28	79	A
TUS-1205 (A or B)	12	5	200	112	11	74	A or B
TUS-1212 (A or B)	12	12	84	102	11	82	A or B
TUS-1215 (A or B)	12	15	67	102	12	82	A or B
TUD-1205A	12	+/-5	+/-100	112	11	74	A
TUD-1212A	12	+/-12	+/-42	102	11	82	A
TUD-1215A	12	+/-15	+/-34	102	12	82	A
TUS-2405 (A or B)	24	5	200	57	8	73	A or B
TUS-2412 (A or B)	24	12	84	54	8	77	A or B
TUS-2415 (A or B)	24	15	67	52	7	80	A or B
TUD-2405A	24	+/-5	+/-100	57	8	73	A
TUD-2412A	24	+/-12	+/-42	54	8	77	A
TUD-2415A	24	+/-15	+/-34	52	7	80	A

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

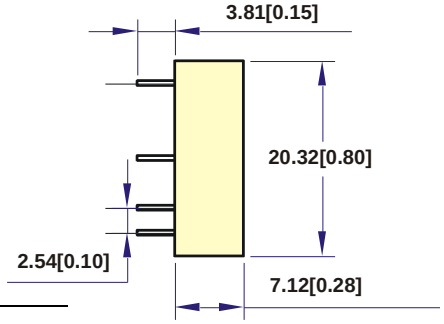
MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

PACKAGE "A"

BOTTOM VIEW



SIDE VIEW



PIN	SINGLE	DUAL
1	-Vin	-Vin
7	NC	NC
8	-Vout	COMMON
9	+Vout	+Vout

[7] NOMINAL INPUT VOLTAGE.

[8] NOMINAL INPUT VOLTAGE, FULL LOAD.

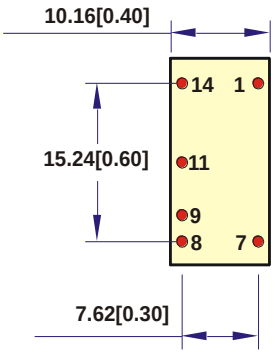
ALL DIMENSIONS ARE IN millimeters[inches]

Tel: 03-90 22 500 Fax: 03-90 22 400 Web: www.avivenergy.co.il Email: nrg@avivenergy.co.il

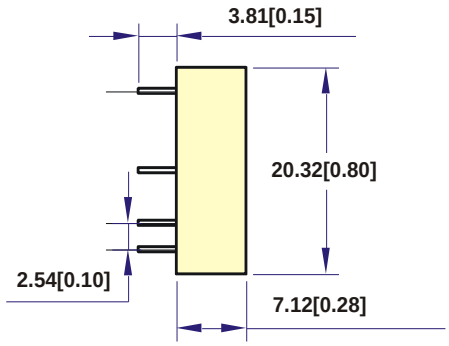
11	NC	-Vout
14	+Vin	+Vin

PACKAGE "B"

BOTTOM VIEW

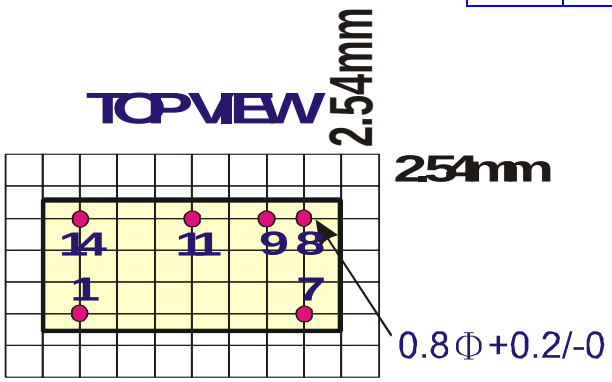


SIDE VIEW



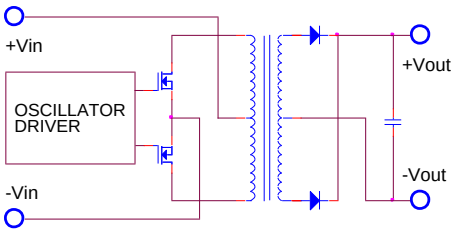
All dimensions are in millimeters[inches]

PIN	SINGLE
1	-Vin
7	NC
8	NO PIN
9	+Vout
11	-Vout
14	+Vin

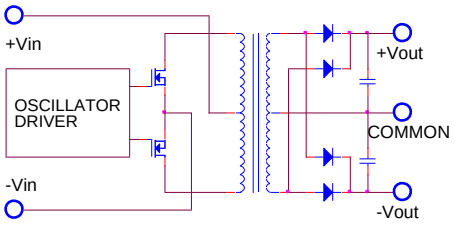


● SIMPLIFIED SCHEMATIC

SINGLE OUTPUT



DUAL OUTPUT



● TYPICAL APPLICATIONS

SINGLE OUTPUT

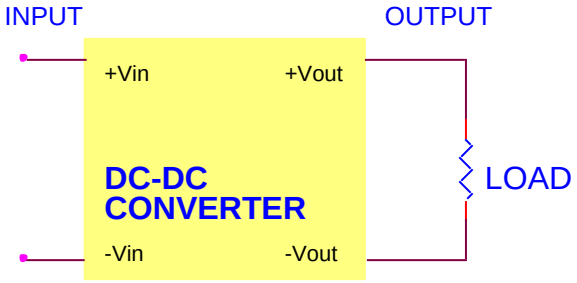
DUAL OUTPUT

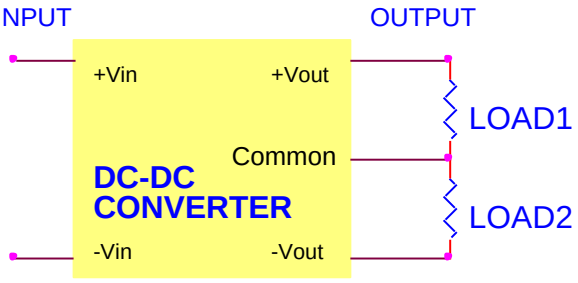
Tel: 03-90 22 500 Fax: 03-90 22 400 Web: www.avivenergy.co.il Email: nrg@avivenergy.co.il

TU SERIES

1W UNREGULATED

AvivEnergy tech ltd.

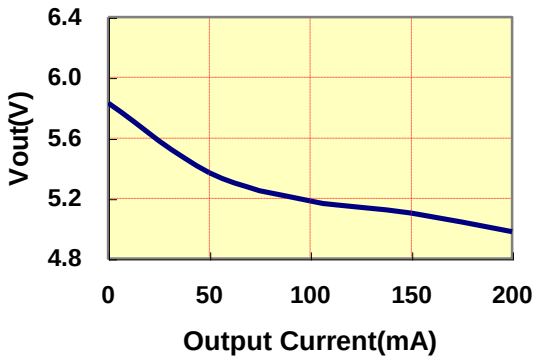




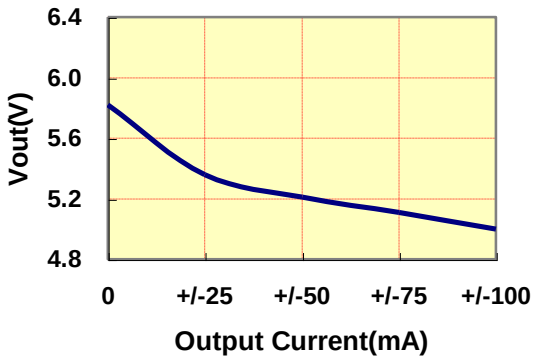
● TYPICAL PERFORMANCE CUREVES

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

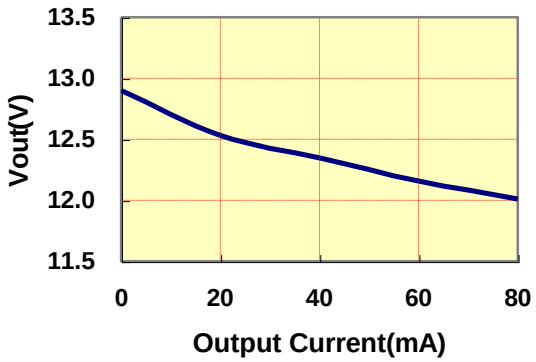
VOUT VS LOAD(5Vout Models)



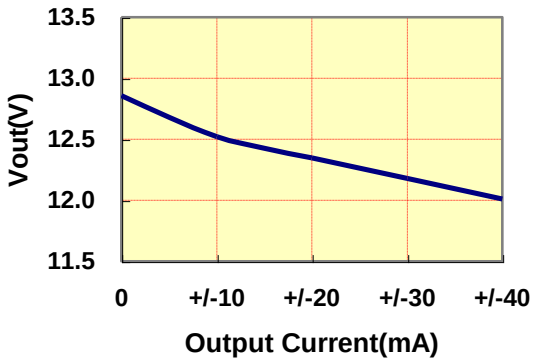
VOUT VS LOAD(+/- 5Vout Models)



VOUT VS LOAD(12Vout Models)



VOUT VS LOAD(+/- 12Vout Models)



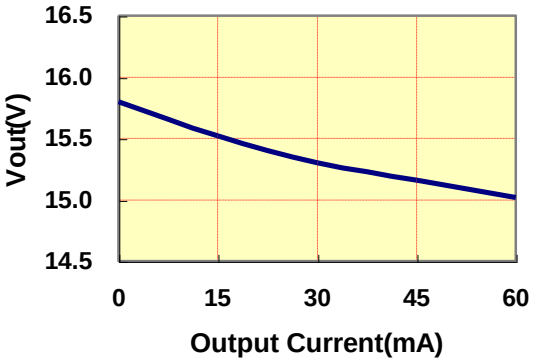
VOUT VS LOAD(15Vout Models)

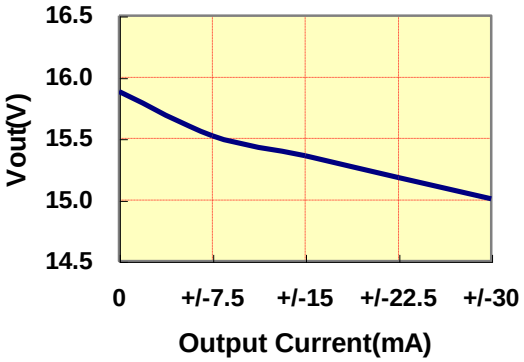
VOUT VS LOAD(+/- 15Vout Models)

Tel: 03-90 22 500 Fax: 03-90 22 400 Web: www.avivenergy.co.il Email: nrg@avivenergy.co.il

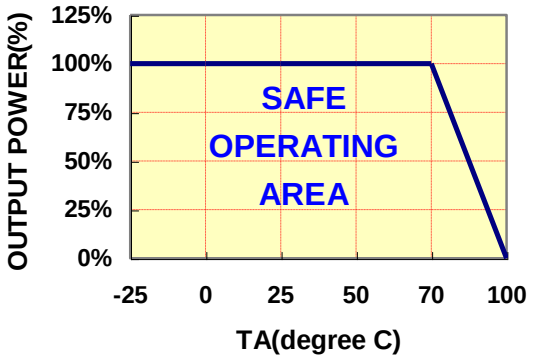
TU SERIES

1W UNREGULATED

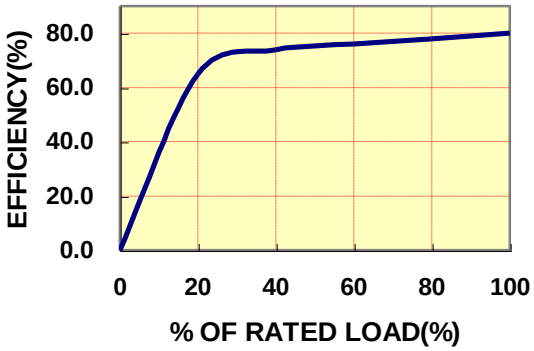




DERATING CURVE

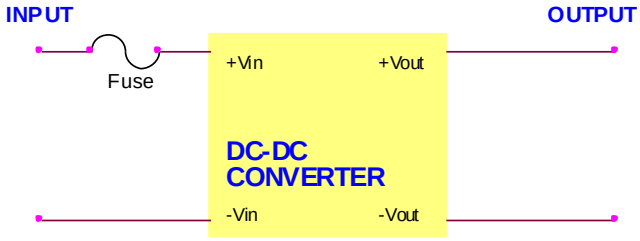


EFFICIENCY VS LOAD



● INPUT FUSE SELECTION GUIDE

4.5-5.5V INPUT VOLTAGE(VDC)	10.8-13.2V INPUT VOLTAGE(VDC)	21.6-26.4V INPUT VOLTAGE(VDC)
400mA Slow-Blow Type	200mA Slow-Blow Type	90mA Slow-Blow Type



Note: Certain applications may require the installation of external fuse in front of the input.

TU 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.

We Can Offer EMC-Filter According To EN55011/22 Class B.

Negative Outputs:

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

Tel: 03-90 22 500 Fax: 03-90 22 400 Web: www.avivenergy.co.il Email: nrg@avivenergy.co.il