

BU10-Serie–Single Output 1 Amp Non-Isolated - unregulated DC-DC Converter

Features

SINGLE IN LINE PACKAGE
6.5-20V、9-18V WIDE INPUT RANGE
100% BURN IN
HIGH EFFICIENCY
INTERNAL SMD TECHNOLOGY
UL 94V-0 PACKAGE MATERIAL
CUSTOM SOLUTIONS AVAILABLE
RoHS COMPLIANT



Specification

Output Specification

Voltage Set-point Accuracy	+/-2% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max.
Line Regulation ²	
BU10**	+/-1% max.
BU10**T	+/-1.5%max.
Load Regulation ³	
BU10**	+/-1% max.
BU10**T	+/-1.5%max.
Minimum Load	
BU10**	0% of Full Load
BU10**T	10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Capacitance Load	220uF max.
Input Voltage Range	6.5-32V、9-18V max.
Input Filter	Capacitor Type

Input Specification

Environmental Specifications

Operating Temperature(with derating)	-40 °C to +85 °C
Case Temperature	+100°C max.
Storage Temperature	-55 °C to +125 °C
Humidity	95% max.

General Specifications

Efficiency	80 % min.
Isolation Voltage	Non-isolation
Switching Frequency	280KHz min.
Weight	1.3g Typ.
Case Material	Non-Conductive Plastic
Case Size	11.6mm*7.6mm*10.14mm
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A
MTBF ⁴	
+25°C	>3,260,000Hours
+71°C	>1,130,000Hours

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

¹ Measured with 1uF ceramic capacitor connect to the output pins

² High Line to Low Line.

³ Load Regulation is for output load current change from 10% to 100%

⁴ MIL-HDBK-217F @25 °C , Ground Benign

Selection Guide (1)

MODEL NUMBER	INPUT VOLTAGE (VDC)	NOMINAL VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁵ CURRENT(mA)		EFF (%) ⁶
					FULL	NO	
					LOAD	LOAD	
BU1025	6.5-20	12	2.5	1000	254	10	82
BU1033	6.5-20	12	3.3	1000	327	10	84
BU1005	6.5-20	12	5	1000	468	10	89

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

Selection Guide (2)

MODEL NUMBER	INPUT VOLTAGE (VDC)	NOMINAL VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷ CURRENT(mA)		EFF (%) ⁸
					FULL	NO	
					LOAD	LOAD	
BU1025T	9-18	12	2.5	1000	248	10	84
BU1033T	9-18	12	3.3	1000	320	10	86
BU1005T	9-18	12	5	1000	463	10	90

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

Note1

MODEL NUMBER

External with output capacitor(min)

BU10**T

27uF LOW ESR(Aluminum Electrolytic Capacitors) OR 47uF/X5R(MLCC)

⁵ NOMINAL INPUT VOLTAGE.

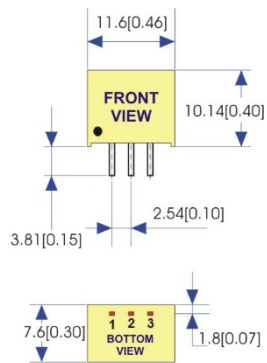
⁶ NOMINAL INPUT VOLTAGE, FULL LOAD.

⁷ NOMINAL INPUT VOLTAGE.

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

Mechanical Dimensions

Package



PIN SINGLE

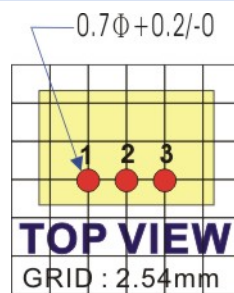
PIN	SINGLE
1	+Vin
2	GND
3	+Vout

NOTE: Pin Size is Tolerance 0.50Φ
±0.05mm
All Dimensions In mm(Inches)
Tolerance .X or .XX= ±0.5mm

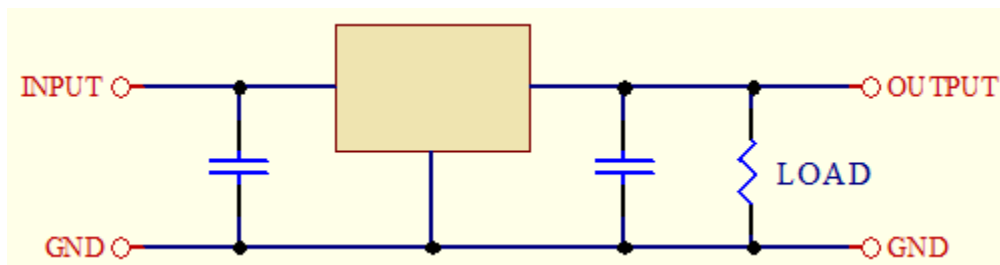
All dimensions in mm[inches].

Recommended Footprint Details

BU10** SELECTION PACKAGE



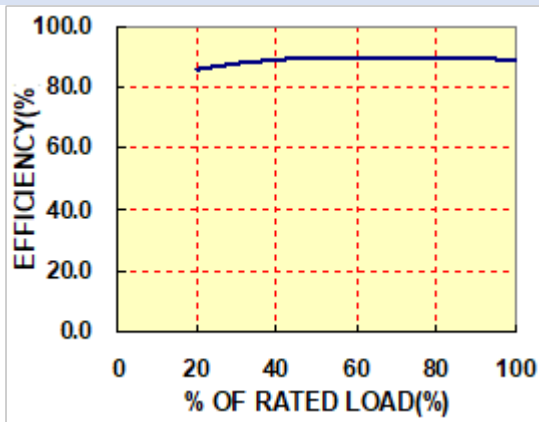
Typical Applications



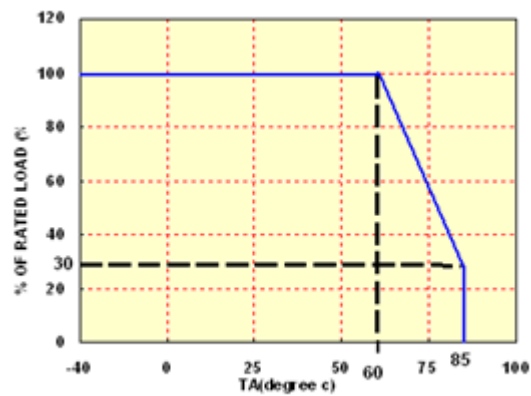
Typical Performance Curves

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

EFFICIENCY VS LOAD



TEMPERATURE DERATING

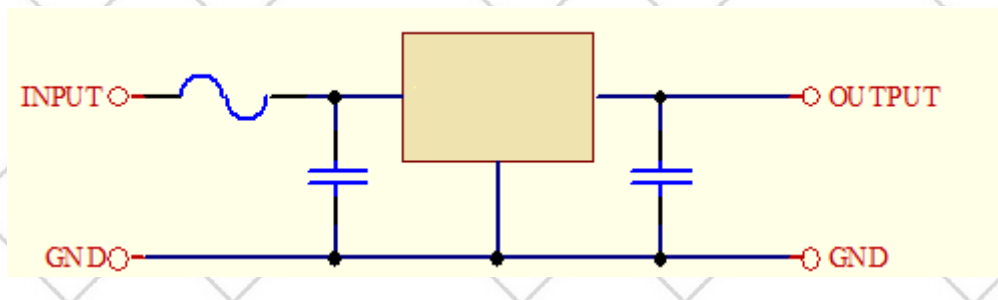


Input Fuse Selection Guide

6.5V-20V、9V-18V

INPUT VOLTAGE(VDC)

1500mA Slow-Blow Type



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

Spezifikationen können sich ohne Vorankündigung ändern.

Für etwaige fehlerhafte Angaben oder unvollständige Bezeichnungen kann keine Haftung übernommen werden.