

D78BXXX-1.0 SERIES

Single Output 1.0Amp

Non-Isolated DC-DC CONVERTER

DANUBE

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



OUTPUT SPECIFICATIONS

Voltage Set-point Accuracy	+/-2% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max.
Line Regulation ²	D78BXXM-1.0 +/-1% max. D78BXXT-1.0 +/-1.5%max.
Load Regulation ³	D78BXXM-1.0 +/-1% max. D78BXXT-1.0 +/-1.5%max.
Minimum Load	D78BXXM-1.0 0% of Full Load D78BXXT-1.0 10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Capacitance Load	220uF max.

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.

INPUT SPECIFICATIONS

Input Voltage Range	6.5-20V、9-18V
Input Filter	Capacitor Type

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 LOAD	NO LOAD	
					D78B25M-1.0	6.5-20	
D78B33M-1.0	6.5-20	12	3.3	1000	327	10	84
D78B05M-1.0	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 LOAD	NO LOAD	
					D78B25T-1.0	9-18	
D78B33T-1.0	9-18	12	3.3	1000	320	10	86
D78B05T-1.0	9-18	12	5	1000	463	10	90

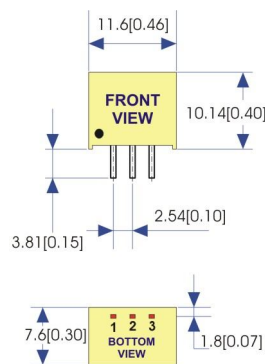
Note: Other input to output voltages may be available. Please contact factory.

Note1.

MODEL NUMBER	External with output capacitor(min)
D78BXXT-1.0	27uF LOW ESR(Aluminum Electrolytic Capacitors) OR 47uF/X5R(MLCC)

● MECHANICAL DIMENSIONS

PACKAGE



All dimensions in mm[inches].

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

⁵ NOMINAL INPUT VOLTAGE.

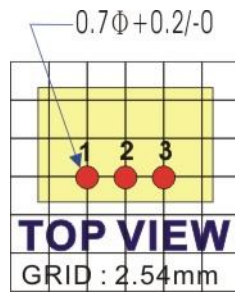
⁶ NOMINAL INPUT VOLTAGE, FULL LOAD.

⁷ NOMINAL INPUT VOLTAGE.

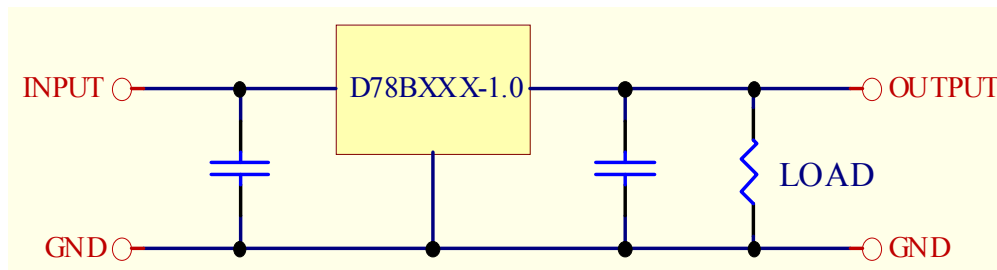
⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

- **RECOMMENDED FOOTPRINT DETAILS**

D78BXXX-1.0 SELECTION PACKAGE



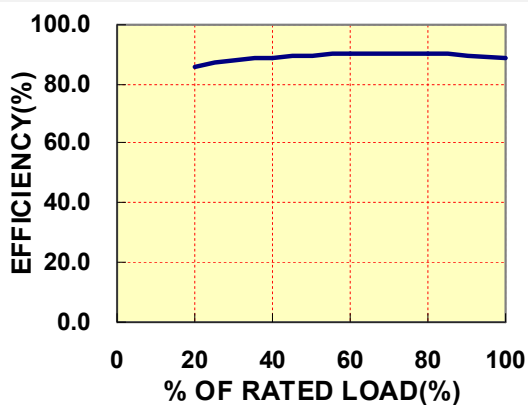
- **TYPICAL APPLICATIONS**



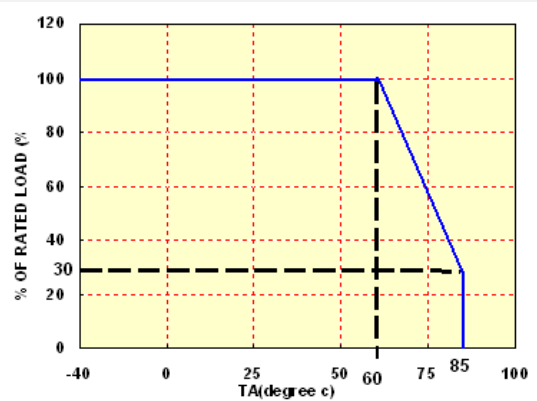
- **TYPICAL PERFORMANCE CURVES**

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

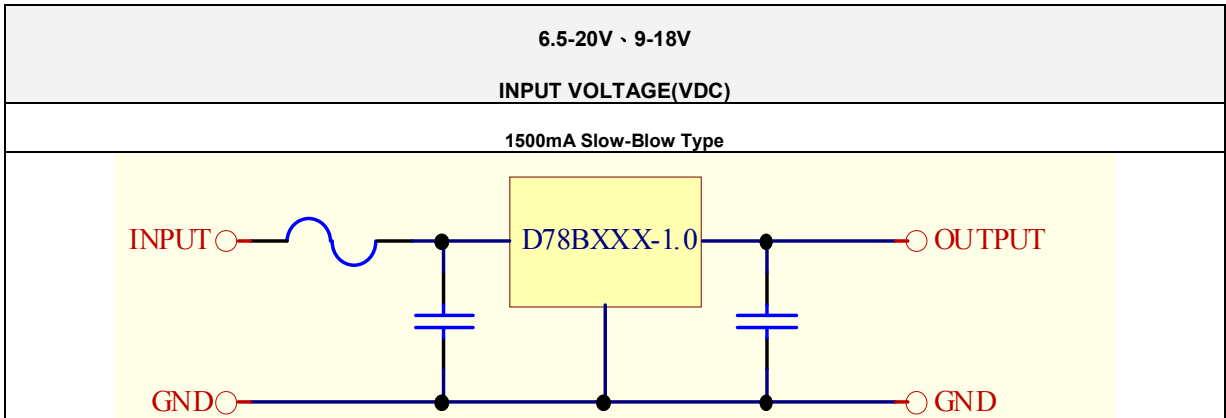
EFFICIENCY VS LOAD



TEMPERATURE DERATING



● INPUT FUSE SELECTION GUIDE



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

FOR MORE INFORMATION CALL:

Danube Enterprise Co., Ltd.

Tel: 886-7-3755165

Fax: 886-7-3755330

E-mail: danube@ms10.hinet.net

Home Page

<http://www.danube.com.tw>
