1 AMP, Wide Input non isolated Switching Regulator
Series DV78-10(L)-V3

Features

- **Wide Input Range**
- **Single Positive**
- **High Efficiency up to 96%**
- **SIP3 Package**
- **Operating Temp. Range -40°C to +85°C**
- **Pin - Compatible with LM78XX Linear**
- **Low ripple and noise**
- **Short circuit protection**
- **No Heat sink required**
- **MTBF>2.000.000 hours**

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT MAX. [mA]	EFFICIENCY [%]		CASE
				Min. Vin	Max. Vin	
DV7803-10(L)-V3	**6 – 36**	**+3,3**	**1000**	**89**	**80**	**SIP3**
DV7805-10(L)-V3	**8 – 36**	**+5**	**1000**	**92**	**85**	
DV7809-10(L)-V3	**13 – 36**	**+9**	**1000**	**94**	**89**	
DV7812-10(L)-V3	**16 – 36**	**+12**	**1000**	**95**	**92**	
DV7815-10(L)-V3	**20 – 36**	**+15**	**1000**	**95**	**93**	

Note:

1. If input voltage above specified may cause permanent damage to the device
2. For input voltage higher than 30 VDC, a 22µF/50V input capacitor is required.
3. **Add suffix (L) for 90° bend pins, for example DV7805-10L-V3**

dev-dorsch electronic vertriebs gmbh ● Münchner Str. 123 ● 85774 Unterföhring
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de ● www.dev-electronic.de

INPUT SPECIFICATIONS:

Input Voltage Range		See Table
No Load Input Current		1mA max.
Input Filter		Capacitor

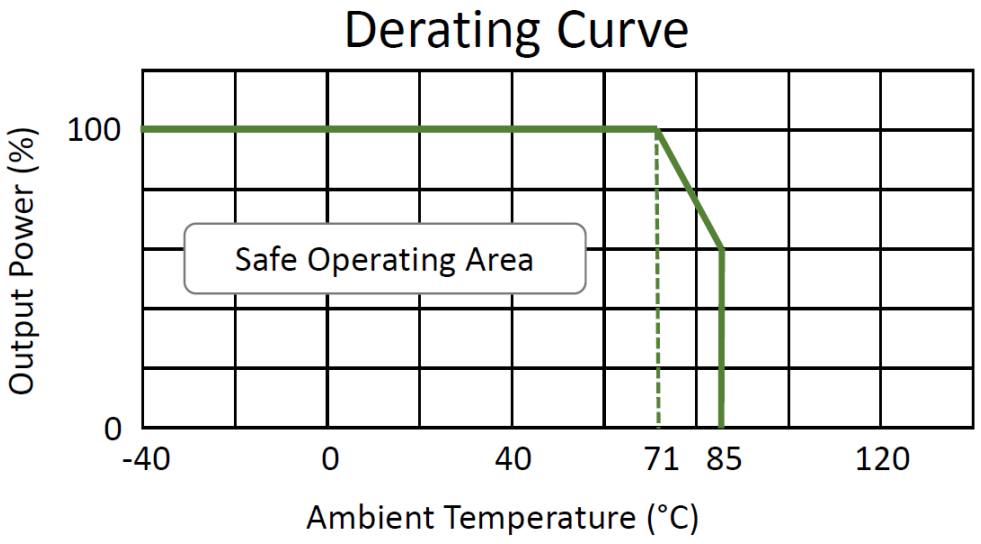
OUTPUT SPECIFICATION:

Output Voltage Accuracy (at 100% load)		±3% max.
	3,3Vout	±4% max.
Line Regulation (Full Load, input voltage range)		±0.4% max.
Load Regulation (10 % to 100% load)		±0.6% max.
Ripple & Noise (20% to 100% Load, 20MHz BW)		75mVp-p max.
Short Circuit Protection		Continuous, automatic revocery
Switching Frequency	Vout 3,3 & 5V	520Khz typ.
	Other Outputs	680Khz typ.
Temperature Coefficient	-40°C to +85°C ambient	0.03 %/°C max.
Max. Capacitive Load		680µF max.

GENERAL SPECIFICATIONS:

Operating Temperature Range	-40°C to +85°C
Derating above 71°C	see Derating Curve
Efficiency	See Table
Storage Temperature Range	-55°C to +125°C
Cooling	Free Air Convection
Pin Welding Resistance Temperature (Welding time: 10s. max.)	260°C (max)
Storage Humidity Range	5% min. / 95% max. non-condensing
Isolation Voltage I/O	Non-Isolation
Case Material	Plastic (UL94-V0)
MTBF (MIL-HDBK-217F @25°C)	2.000.000 hours
Dimension	11.50 x 9.00 x 17.50 mm
Dimension (L Version)	19.00 x 11.50 x 9.00 mm
Weight	3.8g

Note:
1. Test Ripple and Noise by “parallel cable” method.
2. With the load lower than 20%, the maximum ripple and noise of 3,3V/5V output will be 100mVp-p, 9V/12V/15V output will be 2% Vo.
3. All Specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load. Unless Otherwise Noted.



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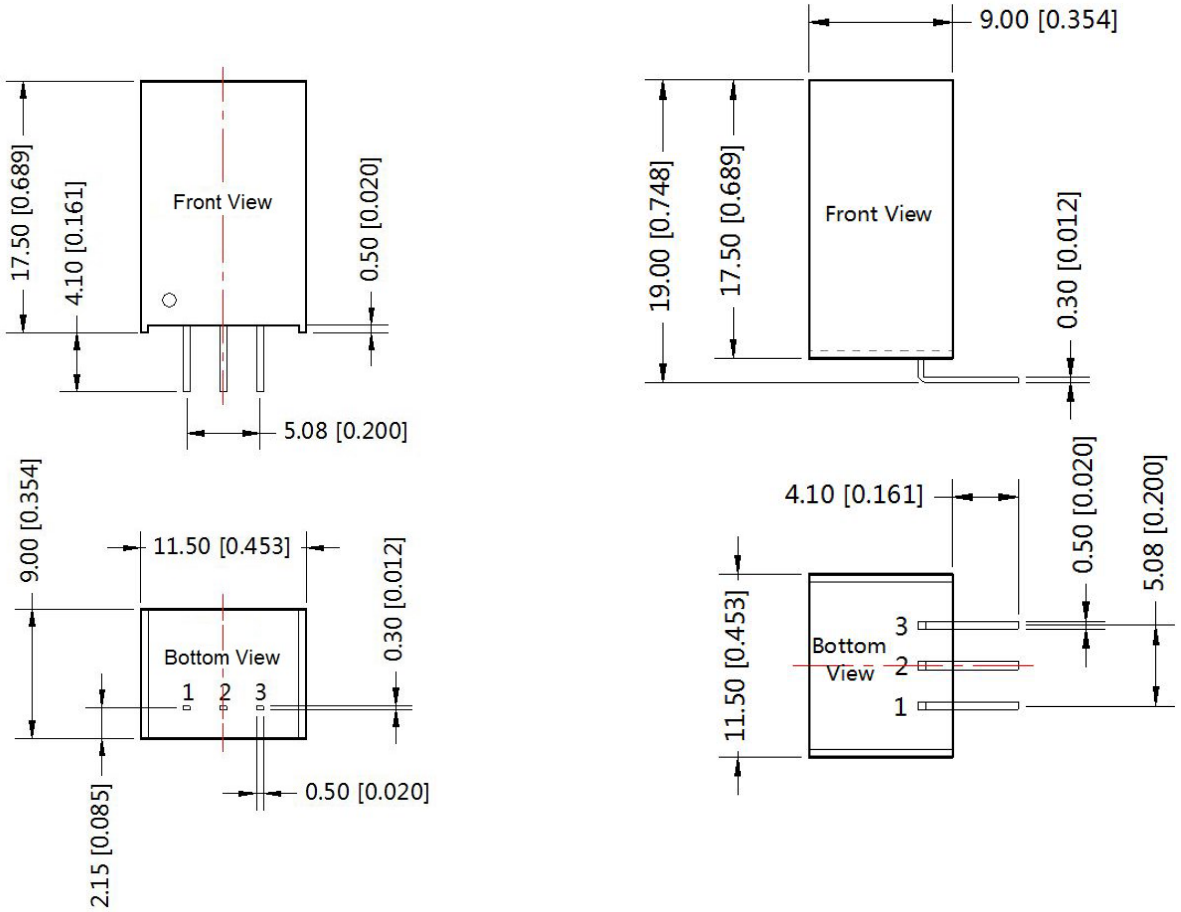
Note:
Unit:mm (inch); Pin tolerances: ±0.10mm(±0.004inch); General tolerances: ±0.25mm (±0.010inch)



Pin	Function
	Positive
1	+Vin
2	GND
3	+Vout

Pin	Function
	Positive
1	+Vin
2	GND
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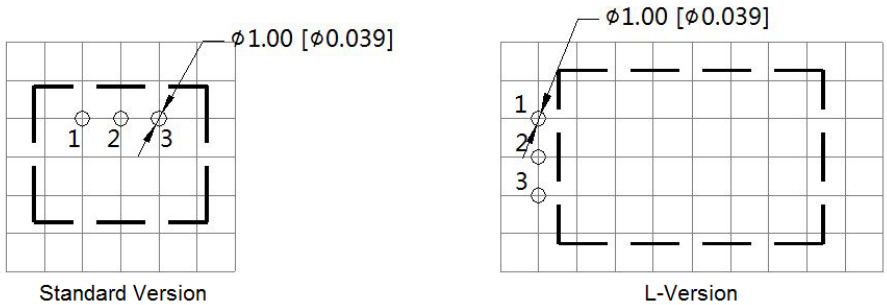

Note : Grid 2.54*2.54mm

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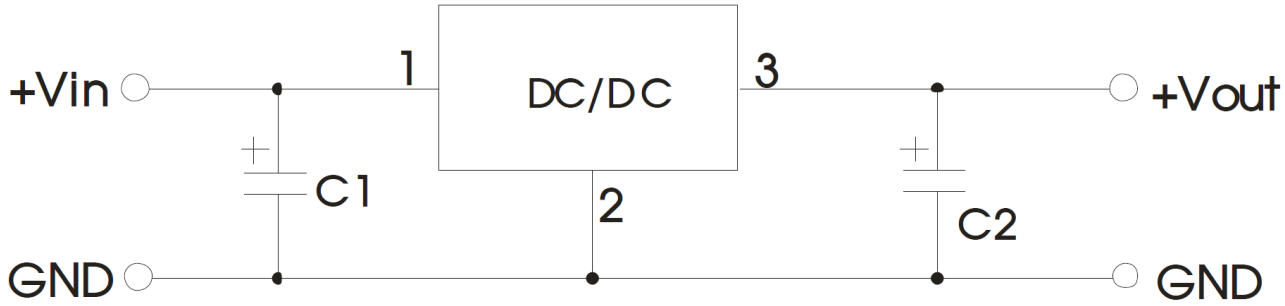

External Capacitor Table

MODEL NUMBER	C1 (ceramic cap.)	C2 (ceramic cap.)
DV7803-10(L)-V3	10uF/50V	22uF/10V
DV7805-10(L)-V3	10uF/50V	22uF/10V
DV7809-10(L)-V3	10uF/50V	22uF/16V
DV7812-10(L)-V3	10uF/50V	22uF/25V
DV7815-10(L)-V3	10uF/50V	22uF/25V

Note: All Capacitors are ceramic capacitor

Note:
1. C1 and C2 (C3 and C4) are required and should be connected close to the pin terminal of the module.
2. The capacitance of C1 and C2 refer to external capacitor table.
3. To reduce the output ripple furtherly, C2 can be increased properly if required, tantalum capacitor and aluminum electrolytic capacitor of low ESR may also suffice.
4. Cannot be used in parallel to enlarge the power for output and hot swap.