

Buck B63**5V Step-Down Switching Regulator PCB Module****1. Features**

- +9V to +60V operating supply voltage
- 5V output at 300mA current output
- Low ripple due to active ripple filter
- No external components needed
- Compact size: 20.8 x 27.5 mm
- -40°C to +125°C temperature operating range
- Thermal shutdown protection

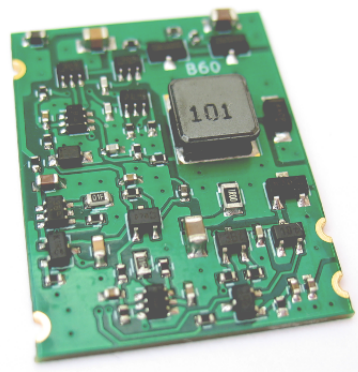
2. Applications

- High Voltage Conversion
- Industrial Power System
- 12V and 48V Power Systems

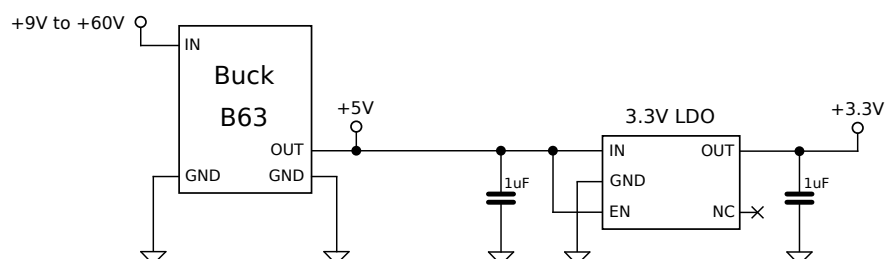
3. Descriptions

Buck B63 is a 5V PCB module requiring no additional components for its operation. It is designed for a broad temperature range.

The output stage consists of an active ripple filter which reduces the output ripple to typically around 5mV.

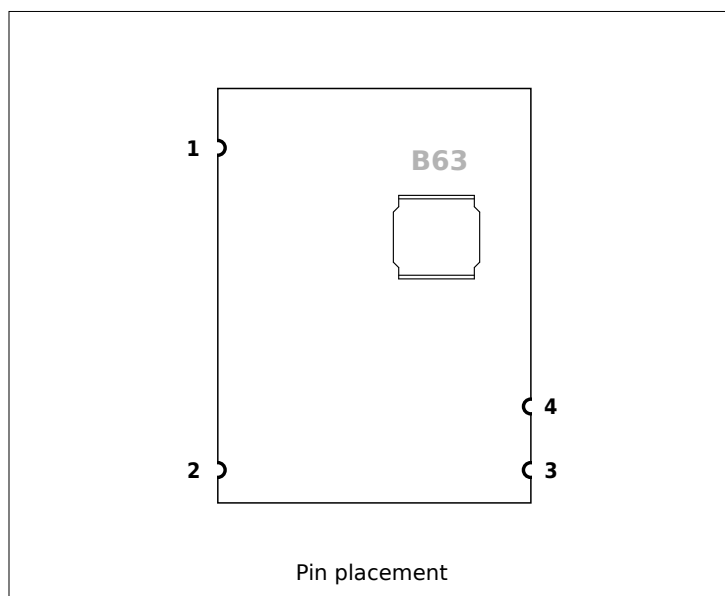


Size: 20.8 x 27.5 mm
0.819 x 1.08 inches



Example with a 3.3V LDO

4.1 Pin Layout



4.2 Pin Assignment

Pin	Name	Description
1	Vin	Voltage input to the module (+9 to +60 V)
2	GND ¹	Ground
3	GND ¹	Ground
4	Vout	Voltage Output from Module (nominally +5.1V)

¹ Note: Both GND pins need to be soldered to ground plane!

5.1 Absolute Maximum Rating

	Min	Max	Unit
Maximum Supply Voltage, V_{in}	-0.3	+65	V
Storage Temperature Range	0	+45	°C
Soldering Temperature (reflow)		+260	°C

5.2 Recommended Operating Conditions

	Min	Max	Unit
Operating Supply Voltage, V_{in}	+9	+60	V
Operating Temperature Range ¹	-40	+125	°C
Maximum Load	0	300	mA

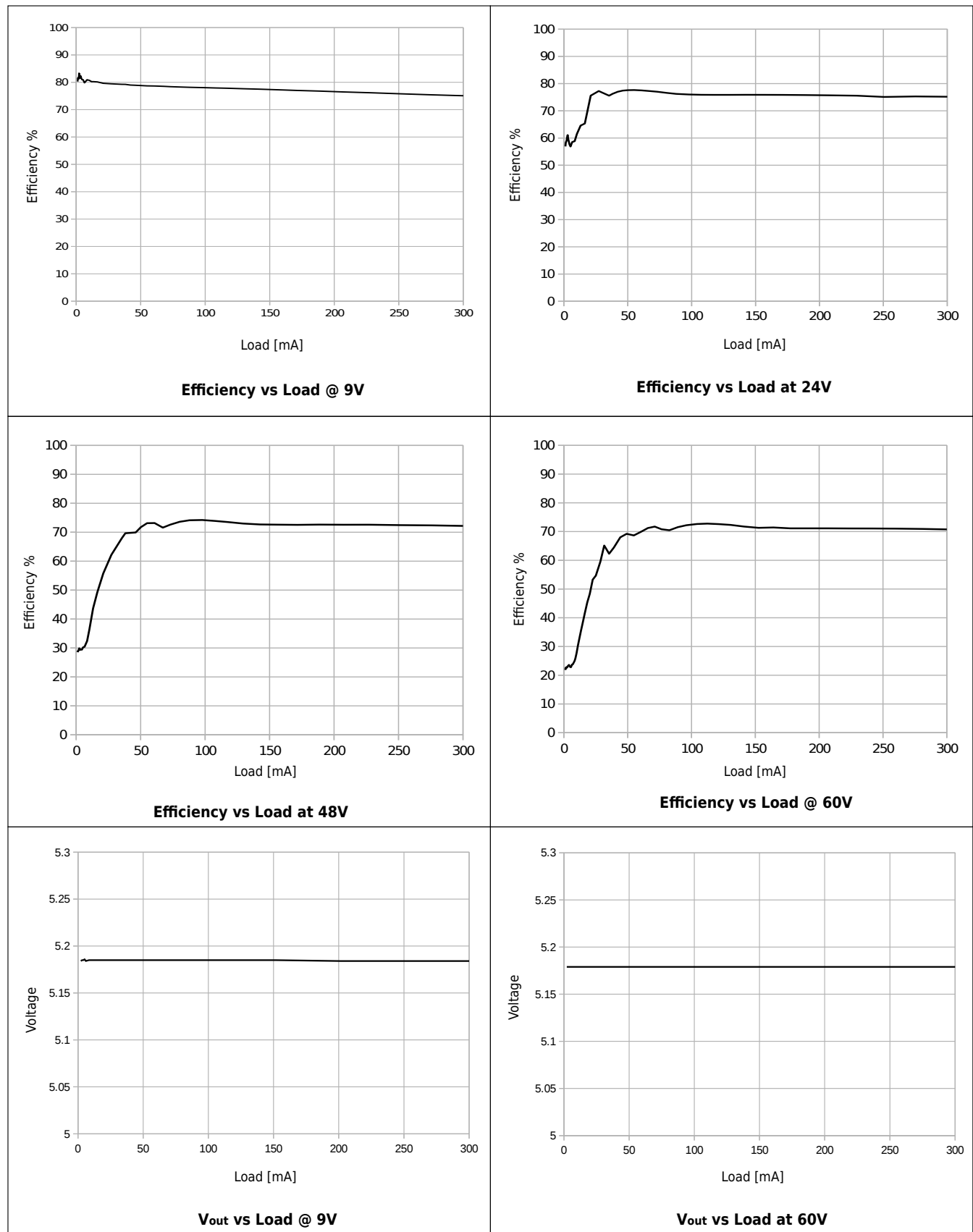
¹ Note: Overheat protection is activated at around +145 °C

5.3 Electrical Characteristic

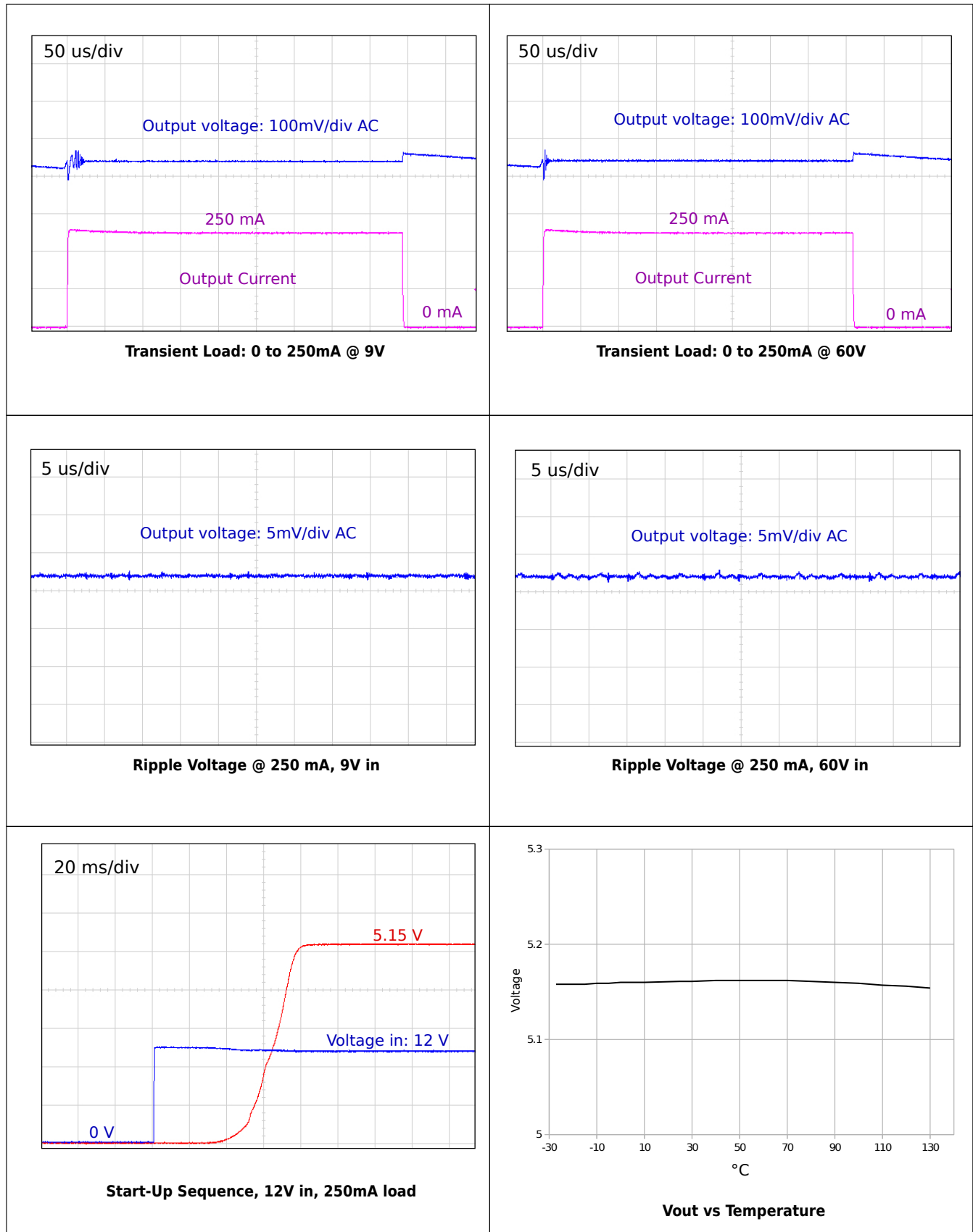
$T_A = +25$ unless otherwise noted

Parameter	Conditions	Min	Typ	Max	Unit
Supply Current	V_{in} : +9V to +60V, no load	5.0	5.5	6.5	mA
Ripple Voltage	$V_{in} = +9V$, Load = 300mA		1.0		mV
	$V_{in} = +24V$, Load = 300mA		1.5		mV
	$V_{in} = +60V$, Load = 300mA		2		mV
Nominal Switching Frequency	$V_{in} = 9V - 60V$, Load = 30 - 300mA	150		600	kHz
Output Voltage	$V_{in} = 9V - 60[V]$, No Load	5.0	5.1	5.20	V
	$V_{in} = 9V - 60[V]$, Load = 300mA	4.95	5.1	5.20	V

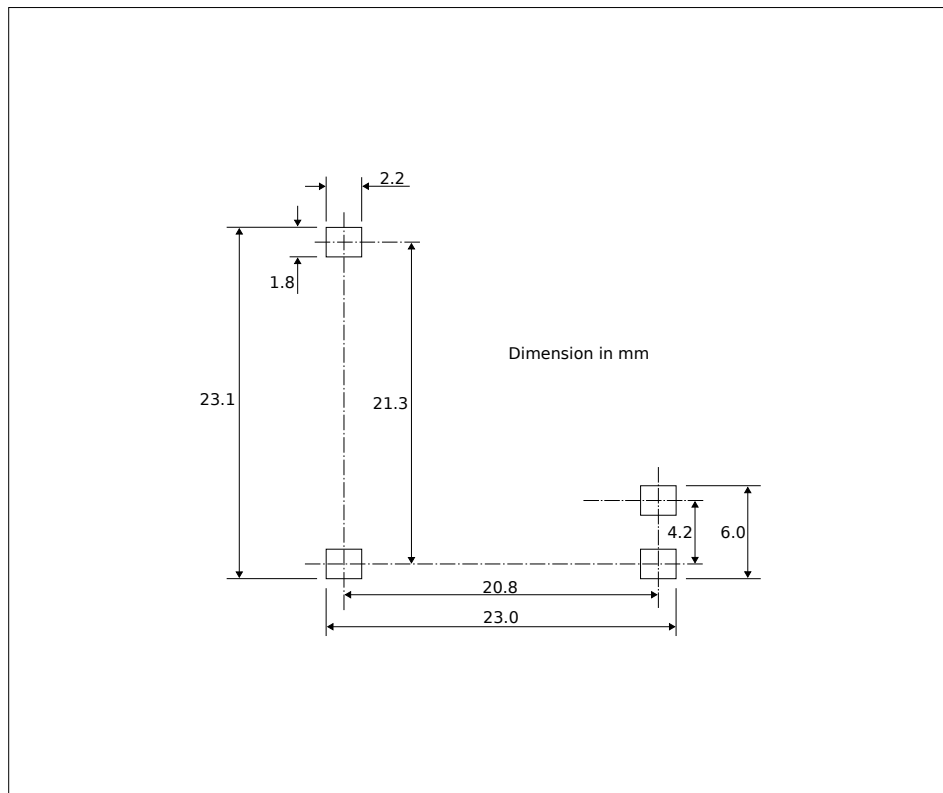
6. Typical Characteristics



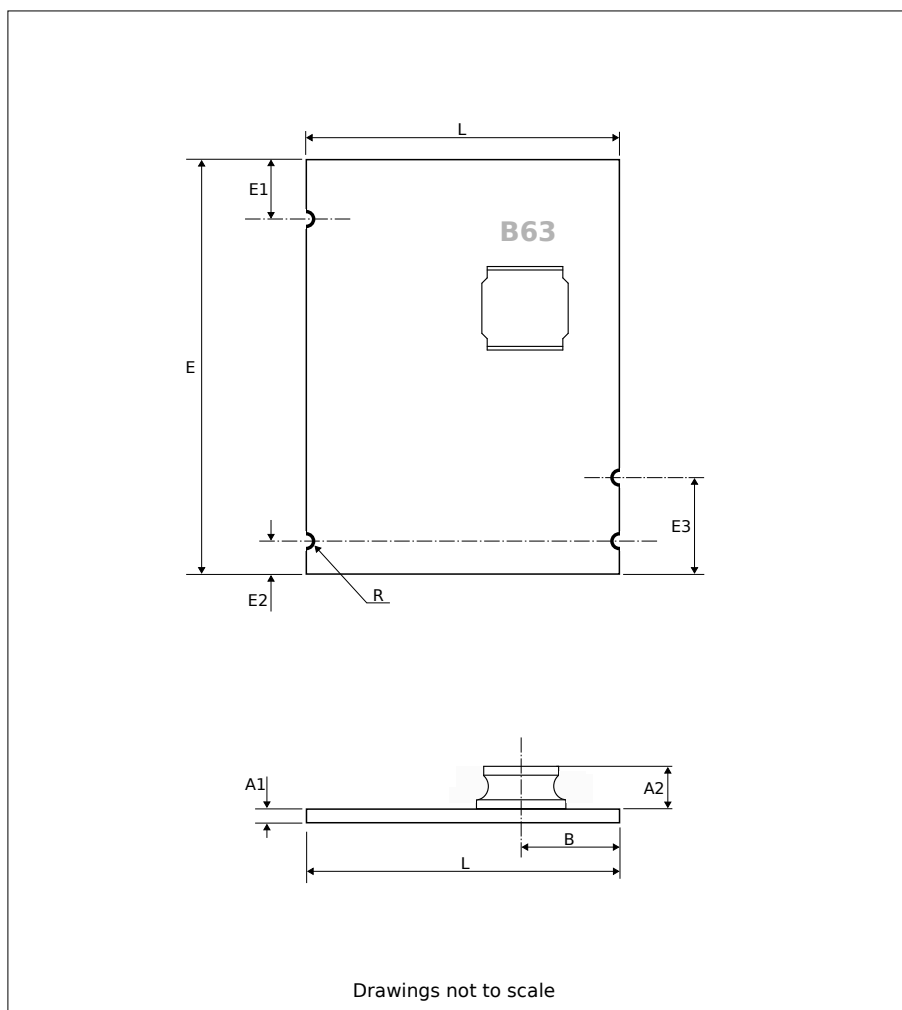
Typical Characteristics (continued)



7. Recommended Footprint



8. Mechanical Data



Symbol	Millimeters			Inches ¹		
	Min	Typ	Max	Min	Typ	Max
A1	0.9	1.0	1.1	0.0354	0.0394	0.0433
A2		2.8	3		0.1102	0.1181
L	20.6	20.8	21.0	0.8110	0.8189	0.0433
B		6.5			0.2559	
E	27.3	27.5	27.7	1.0748	1.0827	1.0906
E1		4.0			0.1575	
E2		2.2			0.0866	
E3		6.4			0.2520	
R		0.6			0.0236	

¹ Values in inches are converted from millimeters

9. Revision history

Date	Revision	Changes
Oct. 2020	0.2	Initial release
Mar. 2021	0.3	Example schematic added
Apr. 2021	0.4	Oscilloscope screenshots added
Aug. 2025	0.5	Some specifications updated

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