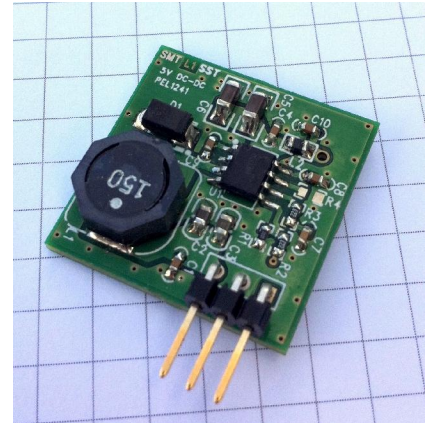


**Features**

Efficiency up to 92%, non-isolated.  
 Dimensions 25x25x7.1mm  
 Wide Input range 7V to 23V  
 Short circuit protection. Thermal shutdown.  
 Heatsink not required below 1.5A, 55°C.  
 Low ripple and noise. Stable with no external capacitors.  
 Other voltage output options available.



**Description**

The PEL-83S5V0 switching regulators can supply up to 2A from a wide input voltage range. The high efficiency means that less energy is wasted as heat and no heatsink is required so reducing size and cost. Pin-out is compatible with 7805 linear regulators.

**Absolute Maximum Ratings**

Supply Voltage Vcc	25V
Lead temperature, (soldering, 5 seconds)	+260°C
ESD protection level, JEDEC JESD22-A114, HBM	3.0kV

**Specifications**

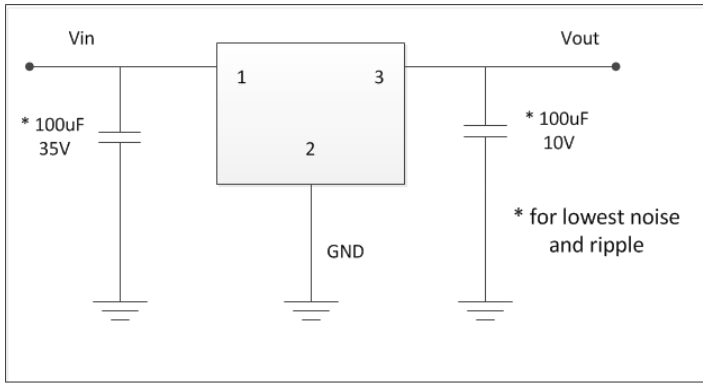
V<sub>in</sub> = 12V, T<sub>a</sub> = 25°C unless otherwise specified

Characteristics	Conditions	Min.	Typ.	Max.
Input Voltage Range Vcc		7.0V		23V
Output Voltage		4.75V		5.25V
Output Current				2.0A
Output Current limit			2.5A	
Short circuit input current			0.15A	
Output voltage accuracy	25°C, V <sub>in</sub> 7 to 23V	-5%		+5%
Output voltage temp. stability	(V <sub>O</sub> -V <sub>O25</sub> )/ΔT %/°C	-0.1%	0.06%	+0.1%
Line Voltage regulation	V <sub>in</sub> = 7 to 23V		±0.2%	
Load voltage regulation	I <sub>out</sub> = 0 to 2.0A		-1.0%	
Output Ripple and Noise	Output cap. 100μF, 0-20MHz		±25mV	
Switching frequency		315	370	435kHz
Quiescent current	Load current = 0A		6	10mA
Operating Temperature Range	* see thermal de-rating note.	-40		+85°C
Storage Temperature range		-65		+150°C
Thermal shutdown	T <sub>j</sub>		155°C	
Start up time			3ms	
Weight			4.5g	

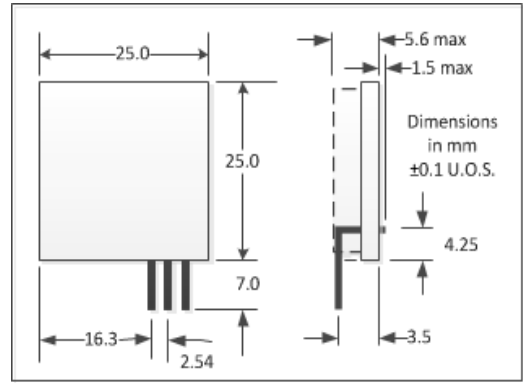
\* Thermal de-rating: -12.5mA/°C above 55°C: Attach heatsink of less than 20°C/W thermal resistance (e.g. Farnell 1710603) if load current exceeds 1.5A and ambient temperature > 55°C.

**N.B. PCB may get hot during operation. Avoid touching PCB or component surfaces.**

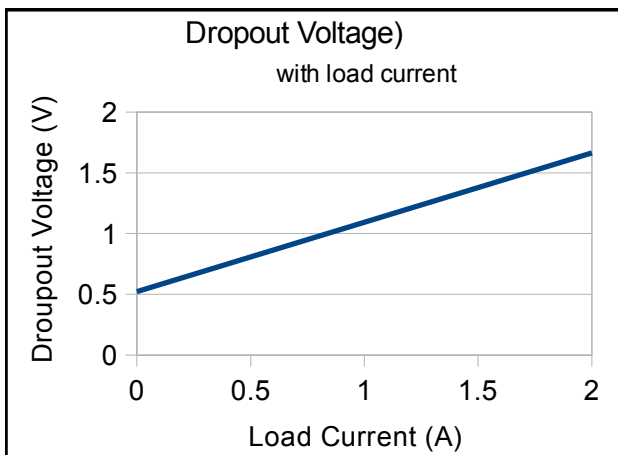
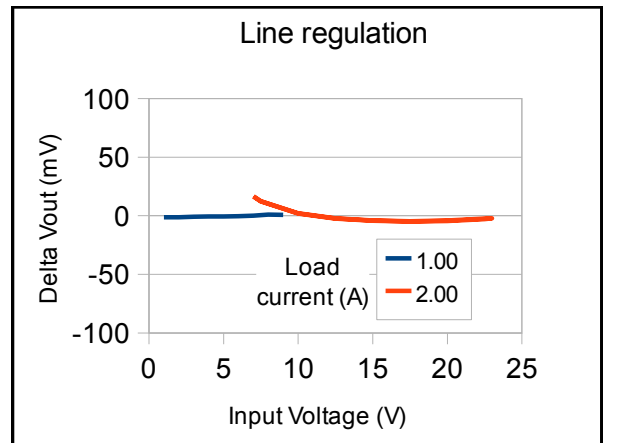
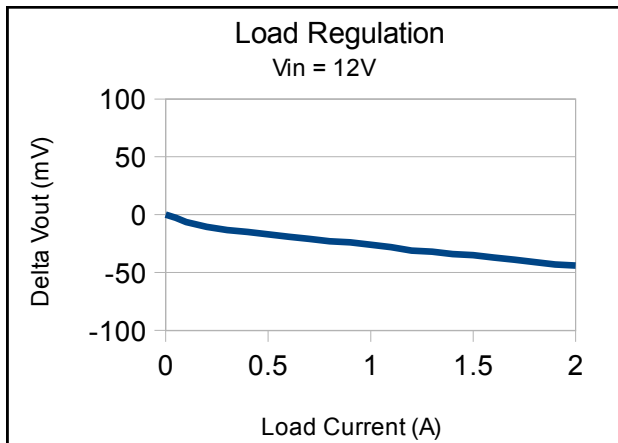
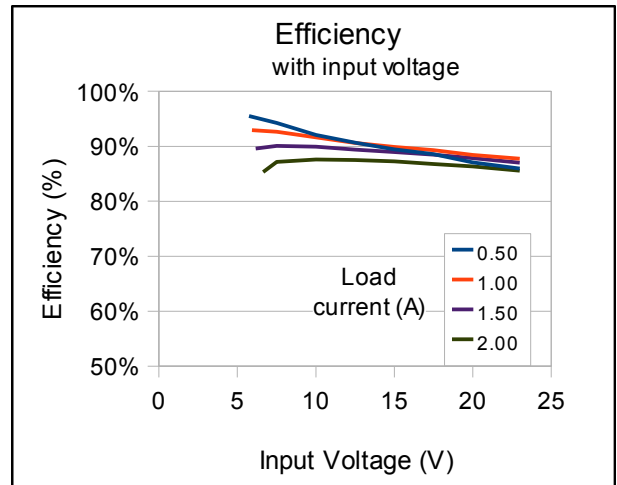
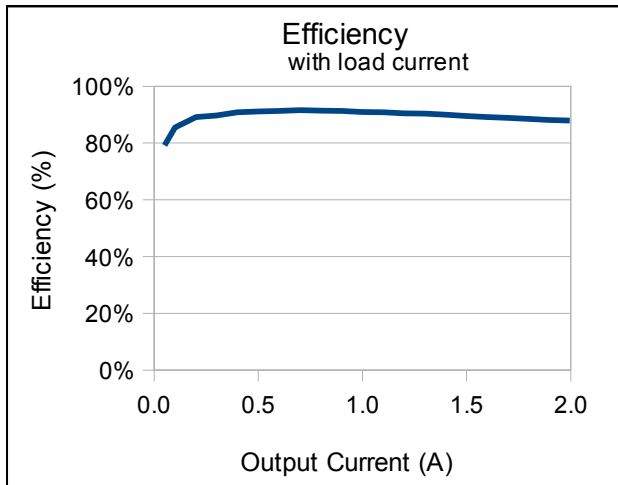
### Standard Application circuit



### Package style and pin-out



### Typical Characteristics



### Start-up transient, 2.0A load

