



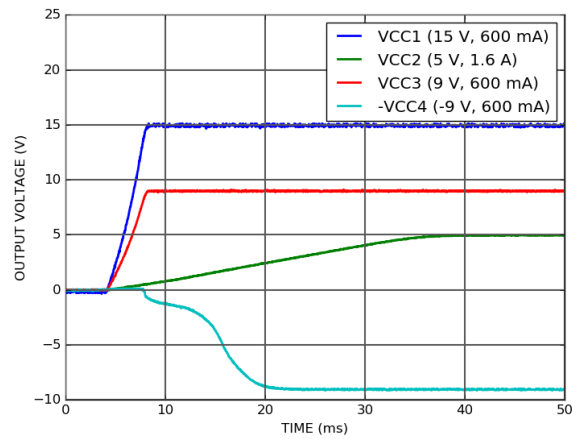
Koheron SPS101 is a 25 W power supply with 4 adjustable outputs (3 positive and 1 negative rails). It operates from a single 18 V to 33 V input supply. Integrated input and output EMI filters ensure low levels of ripple and radiated emissions (< 10 mVpp). The SPS101 allows powering different modules from a single power supply.

Specifications

	SPS101	SPS101-HV
VCC1 output		
Output voltage range	9 V to 15 V	9 V to 15 V
Maximum output current	600 mA	600 mA
Efficiency at 12 V, 0.6 A $V_{in} = 24\text{ V}$	92 %	92 %
Ripple and noise 20 MHz bandwidth, 12 V, 0.6 A	8 mV _{pp}	8 mV _{pp}
Start up time to 15 V	5 ms	5 ms
Load regulation 9 V out.	≤ 2 %	≤ 2 %
VCC2 output		
Output voltage range	3 V to 6 V	11 V to 20 V
Maximum output current	1.6 A	1 A
Efficiency $V_{in} = 24\text{ V}$	87 % (at 6 V, 1.6 A)	92 % (at 15 V, 1 A)
Ripple and noise 20 MHz bandwidth	8 mV _{pp} (5 V, 1.6 A)	20 mV _{pp} (15 V, 1 A)
Start up time	35 ms (to 5 V)	35 ms (to 20 V)
Load regulation	≤ 2 % (3 V out.)	≤ 1 % (1 V out.)
VCC3 output		
Output voltage range	3 V to 9 V	3 V to 9 V
Maximum output current	600 mA	600 mA
Efficiency at 5 V, 0.6 A $V_{in} = 24\text{ V}$	85 %	85 %
Ripple and noise 20 MHz bandwidth, 9 V, 0.6 A	8 mV _{pp}	8 mV _{pp}

Start up time to 9 V	5 ms	5 ms
Load regulation 3 V out.	$\leq 3 \%$	$\leq 3 \%$
VCC4 output		
Output voltage range	-9 V to -3 V	-9 V to -3 V
Maximum output current	1 A	1 A
Efficiency at -5 V, 1 A $V_{in} = 24 \text{ V}$	79 %	79 %
Ripple and noise 20 MHz bandwidth, -9 V, 0.6 A	8 mV _{pp}	8 mV _{pp}
Start up time to -9 V	14 ms	14 ms
Load regulation -3 V out.	$\leq 4 \%$	$\leq 4 \%$
Input power supply		
Input voltage	18 V to 33 V, nom. 24 V	18 V to 33 V, nom. 24 V
Input supply connector	Jack (1.95 mm) or terminal block	Jack (1.95 mm) or terminal block
Input current limit	2.1 A	2.1 A
Input current no load $V_{in} = 24 \text{ V}$, max. voltage on each output	3 mA	3 mA
Surge voltage 10 s max.	$\leq 50 \text{ V}$	$\leq 50 \text{ V}$
Start up voltage	$\leq 17.8 \text{ V}$	$\leq 17.8 \text{ V}$
Undervoltage lock-out	typ. 16.5 V	typ. 16.5 V
Overvoltage lock-out	typ. 35 V	typ. 35 V
Other		
Maximum output power	25 W	25 W
Outside dimensions	79 mm x 50 mm x 15 mm	79 mm x 50 mm x 15 mm
Weight	40 g	40 g
Operating temperature	0 °C to 50 °C	0 °C to 50 °C
Temperature coefficient	200 ppm/°C	200 ppm/°C

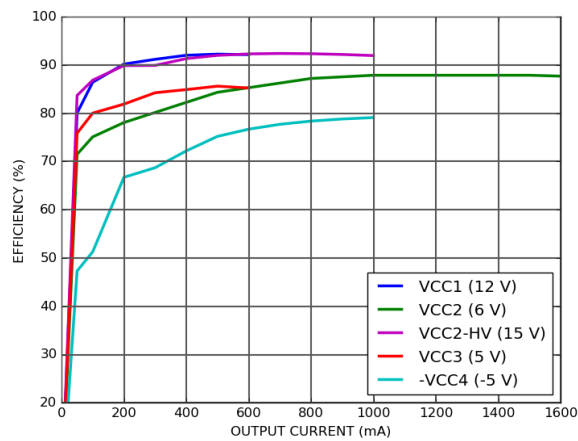
Startup



SPS101 startup

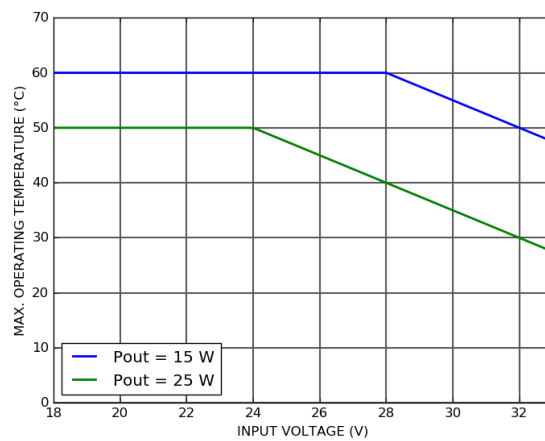
Conversion efficiencies

Input voltage 24 V.



SPS101 conversion efficiency

Maximum operating temperature



SPS101 maximum operating temperature versus input voltage

This rating was obtained using the following loads:

- 15 W: VCC1 10 V, 400 mA; VCC2 5 V, 1.0 A; VCC3 8 V, 400 mA; VCC4 -6 V, -600 mA.
- 25 W: VCC1 12 V, 600 mA; VCC2 5 V, 1.6 A; VCC3 6 V, 600 mA; VCC4 -9 V, -900 mA.

Ordering codes

PRODUCT NUMBER	ATTRIBUTE
SPS101	+VCC2 3 V - 6 V
SPS101-HV	+VCC2 11 V - 20 V