

**Measuring Volt (milli Volt) and under Amp load, over each item in the electric path, to determine heat sources (Watt sources/high mOhm items).**

### Board 14, Polyfuse, 55NF06 mosfet, PSU 12,0V

(11A poly fuse)

Pwr:green plug-in connector. Bed: blue connector

				'Soldered to' = heats PCB			
Red wire (+)	mV	A	0.000 W				### mOh
Connector	35.0 mV	9.35 A	0.327 W	35.0 mV	0.327 W	3.74 mOhm	3.74 mOh
PCB	10.8 mV	9.30 A	0.100 W	10.8 mV	0.100 W	1.16 mOhm	1.16 mOh
Fuse (SMD 7A)	49.5 mV	9.20 A	0.455 W	49.5 mV	0.455 W	5.38 mOhm	5.38 mOh
PCB	6.0 mV	9.15 A	0.055 W	6.0 mV	0.055 W	0.66 mOhm	0.66 mOh
Connector	4.7 mV	9.04 A	0.042 W	4.7 mV	0.042 W	0.52 mOhm	0.52 mOh
Bed + (red wire)	mV	A	0.000 W				### mOh
Heat Bed	10.5 V	9.04 A	94.739 W				1.16 Ohm
Bed- (black wire)	mV	A	0.000 W				### mOh
Connector	3.3 mV	9.00 A	0.030 W	3.3 mV	0.030 W	0.37 mOhm	0.37 mOh
PCB to mosfet	8.6 mV	8.97 A	0.077 W	8.6 mV	0.077 W	0.96 mOhm	0.96 mOh
Mosfet A	522.0 mV	8.92 A	4.656 W	522.0 mV	4.656 W	58.52 mOhm	58.52 mOh
PCB to -	20.3 mV	8.89 A	0.180 W	20.3 mV	0.180 W	2.28 mOhm	2.28 mOh
Connector	27.5 mV	8.84 A	0.243 W	27.5 mV	0.243 W	3.11 mOhm	3.11 mOh
Black wire (-)	mV	A	0.000 W				### mOh
Sum:				687.7 mV	6.167 W	76.70 mOhm	

At the end of measuring, temperatures were taken

Poly fuse	45.7 C		
Mosfet A	180.0 C		
PCB	91.0 C	61.00 C	

### Modified Board 14, 15A Blade, IRLB8748 mosfet, PSU 12,0V

(15A blade fuse)

Pwr and bed: Green plug-in connector

				'Soldered to' = heats PCB			
Red wire (+)	mV	A	0.000 W				###
Connector	68.0 mV	9.53 A	0.648	68.0 mV	0.648 W	7.14 mOhm	7.14 mOh
PCB	10.3 mV	9.53 A	0.098 W	10.3 mV	0.098 W	1.08 mOhm	1.08
Fuse only	mV	A	0.000 W			mOhm	###
Fuse and socket	62.7 mV	9.53 A	0.598 W	62.7 mV	0.598 W	6.58 mOhm	6.58
PCB	3.7 mV	9.53 A	0.035 W	3.7 mV	0.035 W	0.39 mOhm	0.39
Connector	90.0 mV	9.53 A	0.858	90.0 mV	0.858 W	9.44 mOhm	9.44
Bed + (red wire)	mV	A	0.000 W			mOhm	###
Heat Bed	V	A	0.000 W				### Ohm
Bed- (black wire)	mV	A	0.000 W			mOhm	### mOh
Connector	180.0 mV	9.53 A	1.715	180.0 mV	1.715 W	18.89 mOhm	18.89
PCB to mosfet	5.8 mV	9.53 A	0.055 W	5.8 mV	0.055 W	0.61 mOhm	0.61
Mosfet A	67.3 mV	9.28 A	0.625 W	67.3 mV	0.625 W	7.25 mOhm	7.25
PCB to -	18.1 mV	9.36 A	0.169 W	18.1 mV	0.169 W	1.93 mOhm	1.93
Connector	90.0 mV	9.39 A	0.845	90.0 mV	0.845 W	9.58 mOhm	9.58
Black wire (-)	mV	A	0.000 W			mOhm	###
Sum:				595.9 mV	5.646 W	62.89 mOhm	

At the end of measuring, temperatures were taken

Blade fuse	63.6 C		
Mosfet A	64.7 C		
PCB	60.0 C		
Connector	48.0 C	49.3 C	52.1 C 58.2 C

**Modified Board 14, 15A Blade, IRLB8748 mosfet, PSU 12,0V**

(15A blade fuse)

Pwr and Bed: blue connectors

				'Soldered to' = heats PCB					
Red wire (+)	mV	A	0.000 W					###	
Connector	5.3 mV	10.00 A	0.053	5.3 mV	0.053 W	0.53 mOhm		0.53 mOh	
PCB	10.9 mV	10.00 A	0.109 W	10.9 mV	0.109 W	1.09 mOhm		1.09	
Fuse only	64.7 mV	10.00 A	0.647 W			mOhm		6.47	
Fuse and socket	4.7 mV	10.00 A	0.047 W	4.7 mV	0.047 W	0.47 mOhm		0.47	
PCB	4.9 mV	10.00 A	0.049 W	4.9 mV	0.049 W	0.49 mOhm		0.49	
Connector	mV	A	0.000	0.0 mV	0.000 W	#DIV/0! mOhm		###	
Bed + (red wire)	mV	A	0.000 W			mOhm		###	
Heat Bed	V	A	0.000 W					### Ohm	
Bed- (black wire)	mV	A	0.000 W			mOhm		### mOh	
Connector	8.0 mV	10.00 A	0.080	8.0 mV	0.080 W	0.80 mOhm		0.80	
PCB to mosfet	10.0 mV	10.00 A	0.100 W	10.0 mV	0.100 W	1.00 mOhm		1.00	
Mosfet A	69.5 mV	10.00 A	0.695 W	69.5 mV	0.695 W	6.95 mOhm		6.95	
PCB to -	18.7 mV	10.00 A	0.187 W	18.7 mV	0.187 W	1.87 mOhm		1.87	
Connector	3.9 mV	9.92 A	0.039	3.9 mV	0.039 W	0.39 mOhm		0.39	
Black wire (-)	mV	A	0.000 W			mOhm		###	
Sum:				135.9 mV	1.359 W	#DIV/0! mOhm			

At the end of measuring, temperatures were taken

Blade fuse	44.5 C				
Mosfet A	57.3 C				
PCB	C				
Connector	39.9 C	43.5 C	44.5 C	42 C	