

Tabelle1

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MPI5K, 96132206100415, PV2 short circuit

<b>Main Board</b>							
<b>Object</b>	<b>Q3</b>	<b>Q4</b>	<b>Q11</b>	<b>Q12</b>	<b>D12</b>	<b>D4</b>	<b>D40/31</b>
GE / Ohm	24.5K	13,7K	13.84K	13.76k			not on pcb
GC / Ohm	45.5K	45.5K	45.8K	45.7K			
CE / Ohm	0.95M	1.00M	0.95M	0.96M			
EC / V	0.46	0.46	0.46	0.47	0.41	0.42	
<b>Object</b>	<b>IGBT5</b>	<b>D21</b>	<b>IGBT6</b>	<b>IGBT7</b>	<b>D27</b>	<b>IGBT8</b>	<b>IGBT1</b>
GE / Ohm	37.8K		38.0K	37.8K		37.2K	37.9K
GC / Ohm	62.2K		61.6K	61.9K		62.2K	62.5K
CE / Ohm	0.89M		0.86M	0.83M		0.84M	0.81M
EC / V	0.44	0.42	0.45	0.44	0.41	0.47	0.44
<b>Object</b>	<b>D5</b>	<b>IGBT2</b>	<b>IGBT3</b>	<b>D11</b>	<b>IGBT4</b>		
GE / Ohm		38.0K	37.6K		37.1K		
GC / Ohm		61.2K	62.5K		62.3K		
CE / Ohm		0.88M	0.81M		0.82M		
EC / V	0.42	0.42	0.46	0.41	0.45		

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<b>DC-DC Board</b>								
<b>Object</b>	<b>Q23</b>	<b>Q24</b>	<b>Q27</b>	<b>Q28</b>	<b>Q69</b>	<b>Q70</b>	<b>Q74</b>	<b>Q75</b>
GE / Ohm	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
GC / Ohm	690K	690K	690K	690K	690K	690K	690K	690K
CE / Ohm	>20M	>20M	>20M	>20M	>20M	>20M	>20M	>20M
EC / V	0.39	0.39	0.39	0.39	0.40	0.40	0.39	0.39
<b>Object</b>	<b>IRFP44 (Q49)</b>	<b>IRFP44 (Q20)</b>						
GS / Ohm	22.8K	22.8K						
GD / Ohm	47.3K	47K						
DS / Ohm	22.1K	28.2K						
SD / V	0.49	0.48						
<b>Object</b>	<b>Q22</b>	<b>Q26</b>	<b>Q72</b>	<b>Q76</b>	Picture in service manuel correct?			
GE / Ohm	37.3K	37.5K	37.1K	36.3K				
GC / Ohm	820K	850K	890K	890K				
CE / Ohm	>20M	>20M	>20M	>20M				
EC / V	0.41	0.41	0.41	0.41				

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<b>SPS Board</b>							
<b>Object</b>	<b>Q10</b>	<b>R251</b>	<b>D66 +-</b>	<b>D66 -+</b>	<b>D67 +-</b>	<b>D67-+</b>	
GS / Ohm	1.13K						
GD / Ohm	23.1K						
DS / Ohm	>20M						
SD / V	0.53		0.53		0.10		
Ohm		0.1	1.09M	>20M	1.2		
<b>Object</b>	<b>U16 7-5 (coil)</b>	<b>U16 6-5 (coil)</b>	<b>U16 P7-5</b>	<b>U16 P6-5</b>	<b>Tx2 7-9</b>	<b>Tx2 9-12</b>	
Ohm	>20M	>20M	792	1132	1.6	1.7	
<b>Object</b>	<b>F2</b>	<b>D31 +-</b>	<b>D31 -+</b>	<b>D38 +-</b>	<b>R70-R105</b>	<b>Q6</b>	
GS / Ohm						3.85K	
GD / Ohm						9.14K	
DS / Ohm						3.8M	
SD / V						0.52	
Ohm	0.0	2.5K		2.4K	~0.1		
V		0.41		0.39			
<b>Object</b>	<b>D24 +-</b>	<b>D24 -+</b>	<b>D27 +-</b>	<b>D27 -+</b>	<b>U7 P7-5</b>	<b>U7 P6-5</b>	
Ohm		66,2 ~35K			1.9K	1.8K	
V			0.38	> 1,7	not measured		
<b>Object</b>	<b>D10</b>	<b>D5</b>	<b>D16</b>	<b>Q14</b>	<b>R19/R14</b>	<b>U19</b>	<b>F5</b>
GS / Ohm				4.7K			
GD / Ohm				31K			
DS / Ohm				350k			
SD / V	0.47	0.52	0.51	0.52			
Ohm	2,71K	2.99K	3.3K		0.3	39K	0.0
V							

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<b>SPS Board</b>									
<b>Object</b>	<b>D1</b>	<b>D9</b>	<b>D3</b>	<b>D34</b>	<b>Q7</b>	<b>Q8</b>	<b>R24/R27/R7U8 P5-7</b>		<b>U8 P5-6</b>
GS / Ohm					20.7	20.9			
GD / Ohm					1.12M	1.13M			
DS / Ohm					>20M	1.48M			
SD / V					0.51	0.52			
Ohm	43.9K	~480K	230K	300K			0.40	160K	2.02M
V	0.47	0.53	0.52	0.53					

## Additional Measurements

Fuse PCB Grid BoaF1 F2  
 Ohm 0.0 0.0

**Bat Borad Fuse Bar2 Bar3**

Ohm 0.0

**PV Power Switch PV1+ PV1- PV2+ PV2- PV1+- PV2+-**  
 Ohm 0.0 0.0 0.0 0.0 no shortage no shortage

**EMS Output BoracFuse**

Ohm 0.0

**NO Measurements for Borards**

GRID Board Should be measured from my point of view. But no details in service manual. I guess there might be an error at this board too.  
 OP Board none  
 PV EMI Board Should be measured from my point of view. But no details in service manual  
 CNTL Board Should be measured from my point of view. But no details in service manual

Voltage measurements: I used a regulated power supply, limited to 1mA. Raised Voltage untill Diode switched  
 Measurements were all made without desoldering objects  
 Ohms were measured using an ordinary multimeter

Further Details <https://www.eutelli.de/mpi5k>