



Figure 7. S11 ksc reon Layer

Table 1. Parts List By Component Values and Part Numbers

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Designators	Quantity	Description	Rating	Tolerance	Manufact.	Part Number	Comp.
C21A,C21B,C21C	3 ✓	22 µF Electrolytic Cap	25 VDC				AL
C7	1 ✓	220 µF Electrolytic Cap	50 V				AL
C4,C5	2 ✓	330 µF Electrolytic Cap	250 V		Sprague	80D	AL
C2,C3	2	4.7 nF AC Cap	250 VAC		Rifa	PME 289 MA	4970M
C1	1	100 nF AC Cap	250 VAC		Rifa	PME 285 MB	100M
C31A,C31B,C31C	3	0.1 µF Capacitor	250 V	5%	Wima	MKP 10 N	MPP-PPR12:
C6	1	1 µF Capacitor	250 V	10%	Wima	MKP 4	MPP
C11,C41	✓ 2.01	10 nF Capacitor	50 V	10%			Ceramic
C12,C14	✓ 2.01	100 nF Capacitor	50 V	10%			Ceramic
C22A,C22B,C22C	✓ 3	100 pF Capacitor	50 V	10%			Ceramic
Power Line Connector	1	3 pin Connector	0.200"		Phoenix	1729131	
Motor Output	1	4 pin Connector	0.200"		Phoenix	1729144	
Hall Switch Connector	1	5 pin Connector	0.150"		Phoenix	1727049	
D5,D6,D7,D8	4	50 V Diode	1 A		Motorola	1N4001	
D1,D2,D3,D4	4	600 V Diode	6 A		Motorola	MR758 ✓	
D21A,D21B,D21C	3	600 V Diode			Motorola	MR818 ✓ R _e	1N4937
D31A,D31B,D31C	3	Diode				Not Used	
D11A,D11B,D11C,D22A,D22B,D22C	6	30 V Schottky	1/2 A		Motorola	MBR030 ✓ R _e	1N5818
F1	1	10 A Fuse					
D15A,D15B,D15C,D16A,D16B,D16C	5	Green LED			GI	MV54124A	
D14	1	Red LED			GI	MV57124A	
IC11	1	Control IC			Motorola	MC33035	
IC22A,IC22B,IC22C	3	MTO			Motorola	MDC1000A	
Q31A,Q31B,Q31C,Q32A,Q32B,Q32C	6	N-ch Power MOSFET	10 247 AC		Motorola	MTW23N25E	
IC21A,IC21B,IC21C	3	Optocoupler			Motorola	MOC8102	
R12	1	10 kΩ Potentiometer			Bourns	81A1AB26A15	
R13	1	10 kΩ Potentiometer	trimpot		Bourns	3388P1 103	
R41	1	0.01 Ω Resistor	2.25 W	5%	Mills	MRP-2-NI	NLWW
R14,R15A,R15B,R15C,R16A,R16B,R16C	7	1 kΩ Resistor	1/4 W	5%			
R43	1	3 kΩ Resistor	1/4 W	5%			
R11	1	4.7 kΩ Resistor	1/4 W	5%			
R21A,R21B,R21C	3	4.7 Ω Resistor	1/4 W	5%			
R2	1	22 KΩ Resistor	2 W	10%			
R23A,R23B,R23C,R25A,R25B,R25C	6	22 Ω Resistor	1/4 W	5%			
R24A,R24B,R24C	3	100 Ω Resistor	1/4 W	5%			
R42,R44	2	750 Ω Resistor	1/4 W	5%			
R22A,R22B,R22C	3	820 Ω Resistor	1/4 W	5%			
S11,S12,S13,S14	3	SPDT Switch	submin	✓	NKK	#SS 12SDP2	
R1	1	5 Ω cold Thermistor		✓	Keystone	CL10	
T1	1	1.8 mH Transformer	10 A		Pulse Eng.	PE-96188	
T2	1	18 V Transformer	130 mA	✓	Stancor	SW336	
D23A,D23B,D23C,D24A,D24B,D24C	6	10 V Zener	1/4 W		Motorola	1N4897	

R 45 100K
 R 46 1 Meg
 200 Ω
 750 PF
 0.1 MFD
 25V 25 MFD
 2 33 0 39
 1N5352 Zener
 15355B

Q 31 Q 32 = FUJ12MB1300L-060
 L401 300A 600V
 1N5338A 5.1V 3W Z
 1N5821
 WIMA MKP 10 .22 1000V
 UC3710T UNITROD
 SPRAGUE 36D252F400D52B 2500 400V
 ASC 400V 2.0-2.4 MF
 94F5370

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