

HLN9809B R**C*K Circuit Board

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
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Capacitors, chip, 5%, 50V unless otherwise indicated

C1	08-11051A19	poly 1 uF 63V
C2	23-11048B19	lytic 47 uF 20% 16V
C3	23-11048B19	lytic 47 uF 20% 16V
C5	21-13741B69	.1 uF
C6	21-13740B65	470 pF
C7	21-13740B65	470 pF
C8	21-13741B69	.1 uF
C9	23-11048B06	lytic 2.2 uF 20%
C10	23-11048B06	lytic 2.2 uF 20%
C11	23-11048B06	lytic 2.2 uF 20%
C12	23-11048B06	lytic 2.2 uF 20%

Diodes (see note)

CR1	48-88245C22	light emitting, GRN
CR2	48-88245C24	light emitting, RED
CR3	48-88245C23	light emitting, YEL
CR4	48-05129M76	silicon MMBD914
CR5	48-05129M76	silicon MMBD914
CR6	48-84616A01	hot carrier
CR7	48-05129M76	silicon MMBD914
CR8	48-05129M76	silicon MMBD914
CR9	48-80008E01	silicon 1N4005

Fuse

F1	65-05214E04	2 amp
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Jumpers

JU1	09-84181L01	push-on, 2-pin
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Connectors

J1	09-83112N01	6-pin "TELCO"
J2	09-83112N01	6-pin "TELCO"
J3	28-80923V01	male, 16-pin
J4	28-80923V01	male, 16-pin
J5	28-80923V01	male, 16-pin
J6	28-80002R03	3-pin header

Transistors (see note)

Q1	48-80214G01	PNP; type MMBT3906
Q2	48-00869681	PNP; type M9681
Q3	48-80214G02	NPN; type MMBT3904
Q4	48-80214G02	NPN; type MMBT3904
Q5	48-80214G02	NPN; type MMBT3904
Q6	48-80214G02	NPN; type MMBT3904
Q7	48-80214G02	NPN; type MMBT3904
Q8	48-00869660	field effect; type 2N5461
Q9	48-80214G01	PNP; type MMBT3906
Q10	48-80214G01	PNP; type MMBT3906
Q11	48-80214G02	NPN; type MMBT3904
Q12	48-80214G02	NPN; type MMBT3904
Q13	48-80214G01	PNP; type MMBT3906
Q14	48-80214G01	PNP; type MMBT3906
Q15	48-80214G02	NPN; type MMBT3904

Resistors, chip, 5%, 1/8 watt

R1	06-11077B15	47k
R2	06-11077A98	10k
R3	06-11077A98	10k
R4	06-11077A98	10k
R5	06-11077A84	2.7k
R6	06-11077A78	1.5k
R7	06-11077A78	1.5k
R8	06-11077B15	47k
R9	06-11077B15	47k

R10	06-11077A98	10k
R11	06-11077A98	10k
R12	06-11077B15	47k
R13	06-11077B15	47k
R14	06-11077A78	1.5k
R15	06-11077B15	47k
R16	06-11077B15	47k
R17	06-11077B15	47k
R18	06-11077A98	10k
R19	06-11077B15	47k
R20	06-11077A98	10k
R21	06-11077A98	10k
R22	06-11077B15	47k
R23	18-05500L05	variable, 4.7k
R24	18-05500L05	variable, 4.7k
R25	06-11077A78	1.5k
R26	06-11077A78	1.5k
R27	06-11077B15	47k
R28	06-11077A78	1.5k
R29	06-11077A84	2.7k
R30	06-11077B15	47k
R31	06-11077A98	10k
R32	06-11077A50	100
R33	06-11077A90	4.7k
R34	06-11077A90	4.7k
R35	06-11077B15	47k
R36	06-11077A84	2.7k
R37	06-11077A78	1.5k
R38	06-11077A84	2.7k
R39	06-11077B15	47k
R40	06-11077B15	47k
R41	06-11077B15	47k
R42	06-11077B15	47k
R43	06-11077A84	2.7k
R44	06-11077B15	47k
R45	06-11077A50	100
R46	06-11077B15	47k
R47	06-11077A78	1.5k
R48	06-11077A78	1.5k
R49	06-11077B15	47k
R50	06-11077A90	4.7k
R51	06-11077A90	4.7k
R52	06-11077A98	10k
R53	06-11077A98	10k
R54	06-11077A98	10k
R55	06-11077A90	4.7k
R56	06-11077A90	4.7k
R57	06-11077B15	47k

Switches

S1	40-84324C10	4PDT
S2	40-83022M04	SPST (12 pos)
S3	40-80065E02	DPDT

Integrated circuits (see note)

U1	51-84887K13	MC14013 CMOS dual D flip-flop
U2	51-84621K73	MC78L08P 8 volt regulator

Voltage regulator, 250 mW (see note)

VR1	48-80140L11	zener diode 7.5V SOT
VR2	48-80140L11	zener diode 7.5V SOT
VR3	48-80140L11	zener diode 7.5V SOT
VR4	48-80140L11	zener diode 7.5V SOT
VR5	48-80140L11	zener diode 7.5V SOT

Non-referenced items

14-84360C01	insulator (two used under S1, one used under S3)
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Note: For optimum performance, diodes, transistors and integrated circuits must be ordered by Motorola part numbers.