Comp side
Solder side – 4636 05-224-7002-5 c
Date coded – 22/73

RevNo	Revision note	Date	By	Checked
–	–	–	–	–

62pin PCB Plug

K(Ms)	PL2-A1	K(MS)
MDS	PL2-A2	MDS
$\overline{Z8L}$	PL2-A3	$\overline{Z8L}$
Z8S	PL2-A4	Z8S
Z8L	PL2-A5	Z8L
S4S	PL2-A6	S4S
S4L	PL2-A7	S4L
$\overline{S4L}$	PL2-A8	$\overline{S4L}$
KEYPRESS	PL2-A9	N/c
$\overline{S4S}$	PL2-A10	$\overline{S4S}$
F5	PL2-A11	F5
Z4	PL2-A12	Z4
$\overline{F4}$	PL2-A13	$\overline{F4}$
F4	PL2-A14	F4
READ	PL2-A15	READ
(Usp) –13.5V	PL2-A16	–13.5V
(Usp) –13.5V	PL2-A17	–13.5V
Z8	PL2-A18	Z8
ZMD	PL2-A19	ZMD
(Usp) –13.5V	PL2-A20	–13.5V
ZAC3	PL2-A21	ZAC3
ZAC0	PL2-A22	ZAC0
ZAC1	PL2-A23	ZAC1
WRITE	PL2-A24	WRITE
ZMR	PL2-A25	ZMR
ZAC2	PL2-A26	ZAC2
$\overline{F5}$	PL2-A27	$\overline{F5}$
N/c	PL2-A28	N/c
$\overline{Z8}$	PL2-A29	$\overline{Z8}$
$\overline{Z4}$	PL2-A30	$\overline{Z4}$
AC	PL2-A31	AC
ACO	PL2-B1	ACO
MRS	PL2-B2	MRS
N/c	PL2-B3	N/c
N/c	PL2-B4	N/c
S1	PL2-B5	S1
COM2	PL2-B6	COM2
COM2	PL2-B7	COM2
COM2	PL2-B8	COM2
$\overline{Z8S}$	PL2-B9	$\overline{Z8S}$
SS3	PL2-B10	SS3
$\overline{T}$	PL2-B11	$\overline{T}$
T	PL2-B12	T
N/c	PL2-B13	2GR36-VE
BL8	PL2-B14	BL8
BL1	PL2-B15	BL1
SS2	PL2-B16	SS2
N/c	PL2-B17	N/c
SS4	PL2-B18	SS4
SS1	PL2-B19	SS1
N/c	PL2-B20	N/c
N/c	PL2-B21	N/c
C8	PL2-B22	C8
Z1	PL2-B23	Z1
N/c	PL2-B24	N/c
C1	PL2-B25	C1
Z2	PL2-B26	Z2
$\overline{Z1}$	PL2-B27	$\overline{Z1}$
$\overline{Z2}$	PL2-B28	$\overline{Z2}$
0V	PL2-B29	0V
+12V(+Up)	PL2-B30	+12V
–12V(–Un)	PL2-B31	–12V

BOARD-2 [6]

These diagrams are referenced to 0V – Logical 1 = +12v, logical 0 = 0v
Signal names are from German logic diagrams which reference +12V – Logical 1 = 0V, 0 = +12V

© 2008 Mike Hatch. (www.soemtron.org)

DM Associates
33, Northbrook Road
Aldershot, Hampshire. GU11 3HE
Email: mike@soemtron.org
www.soemtron.org

Pcb Dwg # =			Scale	Nts
	Name	Date	Sheet	5
Drawn	MD Hatch	12/5/2008	Next Sheet	6
Checked	–	–	Drawing Number	Soemtron 220 A2 Issue A

Title: Soemtron ETR 220 Calculator
Core Drivers
BOARD 2

Solder side – 05-224-7002-5c

RevNo	Revision note	Date	By	Checked
–	–	–	–	–

BOARD-2 [5]

-12V 0V +12V +12V 0V -12V

S1 2C33 560pF 2GR61 Txr K(MS) 2W102 10K

2W84 56K 2W83 1k 2W91 470R 2C40 560pF 2GR74 GAZ17r 2W92 10K 2W94 1k 2TR34 GS109

+12V 2W108 50k 4K7 2W103 560pF 2C41 2W101 1k GAZ17r 2GR75 2TR41 GS109 2W93 1k

4uS

2W59 68K 2W70 8k2 2C25 560pF 2TR25 GS109 2W76 1K5

N1

2W48 47k 2W69 8k2 2C26 560pF 2TR20 GS109 2W60 1K5

N2

T

T

K12

T Z8 READ 2GR6 GAZ17b 2GR8 GAZ17b 2GR5 GAZ17b 2W5 12K 2C3 560pF 2W12 10K

2W4 68K 2TR6 GS109 spot 2GR7 2W6 820r 2C4 560pF 2U2 2TR2 2G210

Z8L COM2 Z8L

K13

T WRITE Z8 2GR23 GAZ17b 2GR22 GAZ17b 2GR25 GAZ17b 2W21 12K 2C11 560pF 2W29 10K

2W20 68K 2TR44 GS109 spot 2GR24 2W22 820r 2C13 560pF 2U6 2TR10 2G210

Z8S COM2 Z8S

K14

T READ ZB 2GR30 GAZ17b 2GR29 GAZ17b 2GR28 GAZ17b 2W25 12K 2C15 560pF 2W38 10K

2W24 68K 2TR17 GS109 spot 2GR31 2W37 820r 2C16 560pF 2U8 2TR12 2G210

Z8L COM2 ZBL

K15

T WRITE ZB 2GR16 GAZ17b 2GR14 GAZ17b 2GR15 GAZ17b 2W10 12K 2C7 560pF 2W16 10K

2W9 68K 2TR8 GS109 spot 2GR17 2W15 820r 2C8 560pF 2U4 2TR4 2G210

Z8S COM2 ZBS

K24

T WRITE C1 2GR19 GAZ17b 2GR21 GAZ17b 2GR20 GAZ17b 2W19 12K 2C10 560pF 2W26 10K

2W17 68K 2TR13 GS109 spot 2GR18 2W18 820r 2C9 560pF 2U5 2TR9 GS111

Inhibit Bit (plane) 1 BL1 COM2 MP7 BL1

K25

T WRITE C8 2GR4 GAZ17b 2GR3 GAZ17b 2GR2 GAZ17b 2W3 12K 2C2 560pF 2W11 10K

2W1 68K 2TR5 GS109 spot 2GR1 2W2 820r 2C1 560pF 2U1 2TR1 GS111

Inhibit Bit (plane) 8 BL8 COM2 MP8 BL8

K6

T MRS 2GR64 GAZ17b 2GR63 GAZ17b 2W85 12K 2C35 560pF 2W77 10K

2W86 68K 2TR31 GS109 spot 2GR62 2W78 820r 2C34 560pF 2U18 2TR35 2G210

ZMR ZMR 2(A)

K7

T MDS 2GR38 GAZ17b 2GR39 GAZ17b 2W34 12K 2C20 560pF 2W50 10K

2W33 68K 2TR21 GS109 spot 2GR37 2W49 820r 2C19 560pF 2U10 2TR15 2G210

ZMD ZMD 2(A)

These diagrams are referenced to 0V – Logical 1 = –12v, logical 0 = 0V

© 2008 Mike Hatch. (www.soemtron.org)

DM Associates
33, Northbrook Road
Aldershot, Hampshire. GU11 3HE
Email: mike@soemtron.org
www.soemtron.org

Pcb Dwg # =			Scale	Nts
	Name	Date	Sheet	6
Drawn	MD Hatch	12/5/2008	Next Sheet	7
Checked	–	–	Drawing Number	Soemtron 220 A2 Issue A

Title: Soemtron ETR 220 Calculator
Core Drivers
BOARD 2 Sheet 2