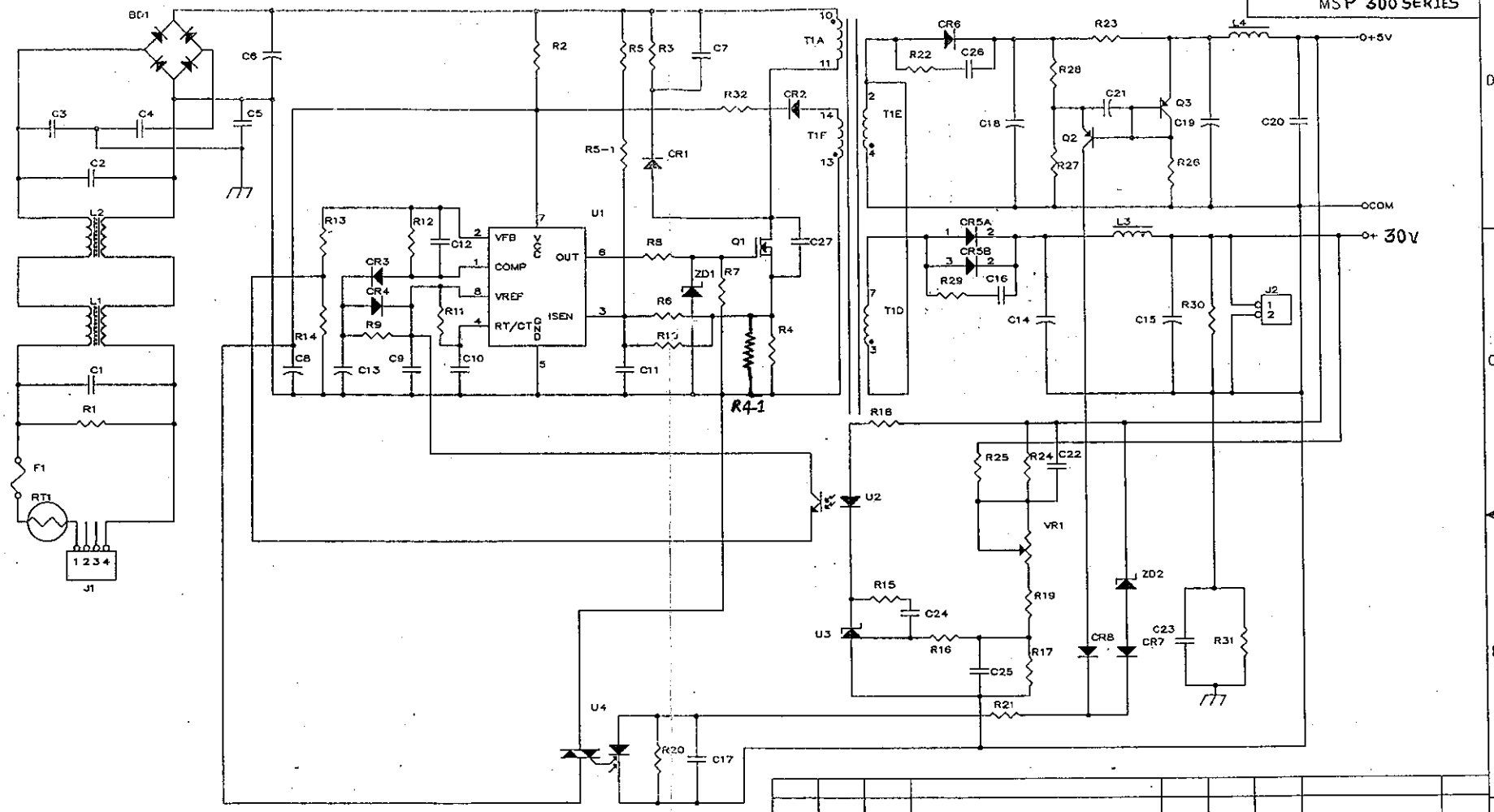
EXHIBIT D

Circuit Diagram



MSP 330 POWER SUPPLY UNIT.

MOD LTR	REF No.	ZONE	MODIFICATION DETAILS	CHKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	062	—	REFER ECN No 9675624		20/2/98			
A	PD330		FIRST ISSUED		1/1/94			

MATERIAL: AS PER PARTS LIST 1A161466

FINISH: —

TITLE: SCHEMATIC DIAGRAM, PWA,PSU,MSP 300 SER

ALL DIMENSIONS IN MM

DRAWN	R.RAMESH	05.09.94	
CHECKED	R.RAMESH	05.09.94	
APPROVED	M.R.NAIR	05.09.94	

TVS ELECTRONICS — TVS ELECTRONICS LIMITED

NUMBER: 1S161466 | SIZE: A3

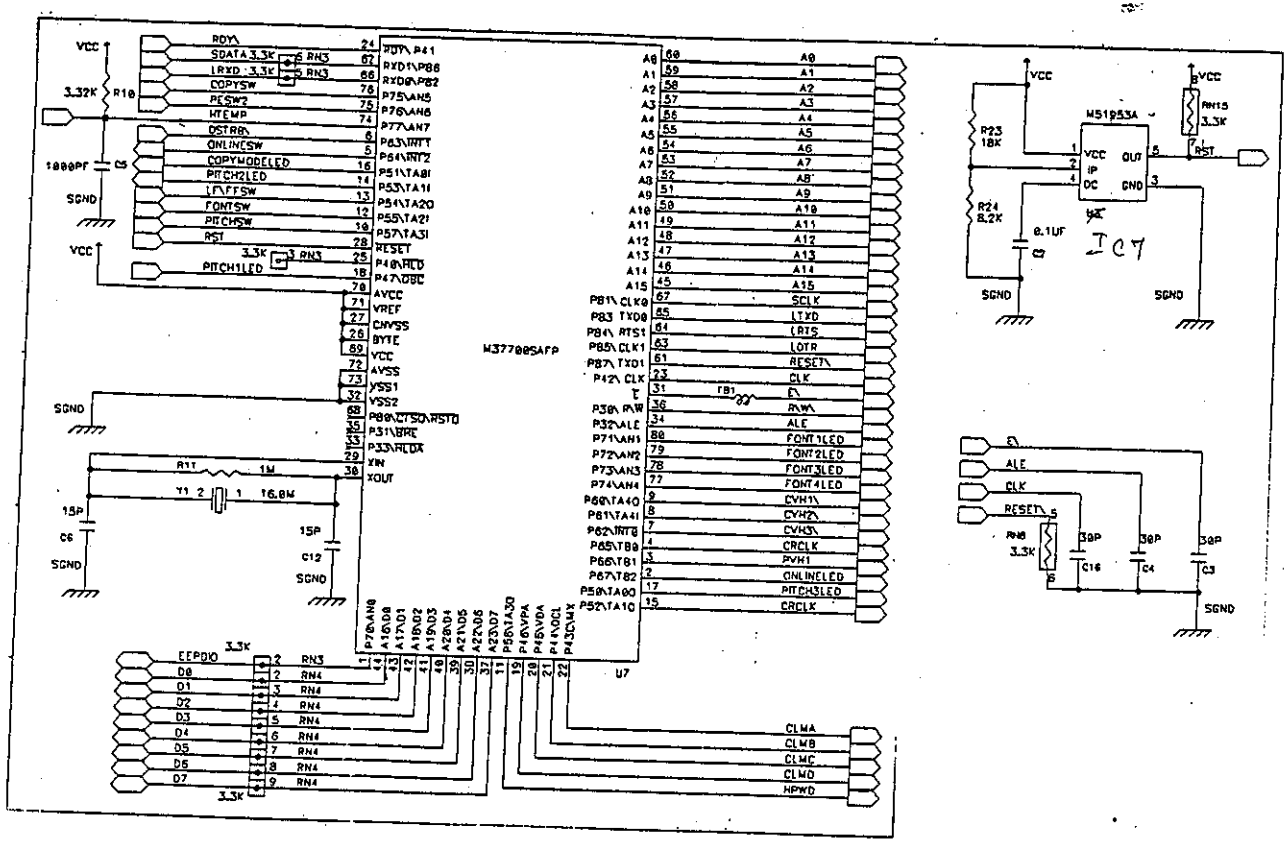
SCALE NTS | SHEET 1 OF 1 | MOD LTR: B

PRINTER

MSP 345

MSP 330

11 Sheets.



CPU

IC4

REVISION	REF No.	ZONE	MODIFICATION DETAILS	CHKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	9575268		REFER ECN NO. 9575268.		20.12.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH: —

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

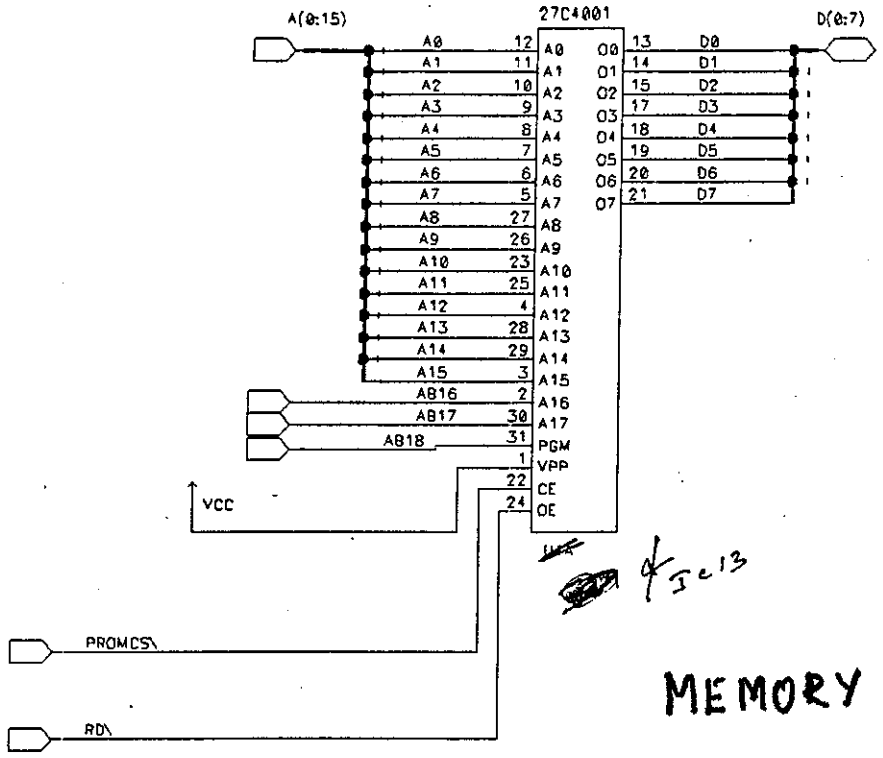
TVS ELECTRONICS — TVS ELECTRONICS LIMITED

NUMBER 1S161454 | SIZE A3 | SCALE NTS | SHEET 1 OF 10 | REVISION B

1

/USER/PCB/CPU/13.DRW 25 MAY 98 19:03 last update: 25 MAY 98 19:02

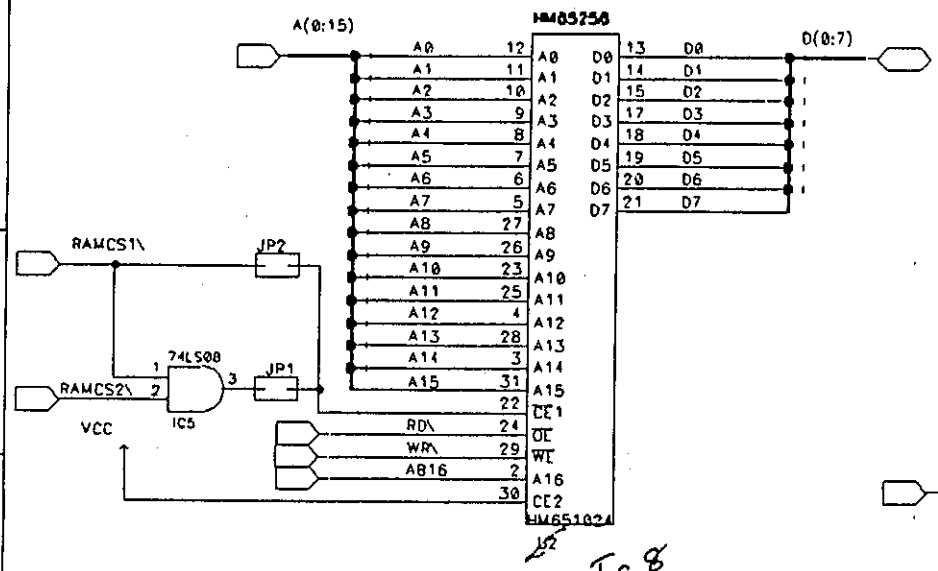
(2)



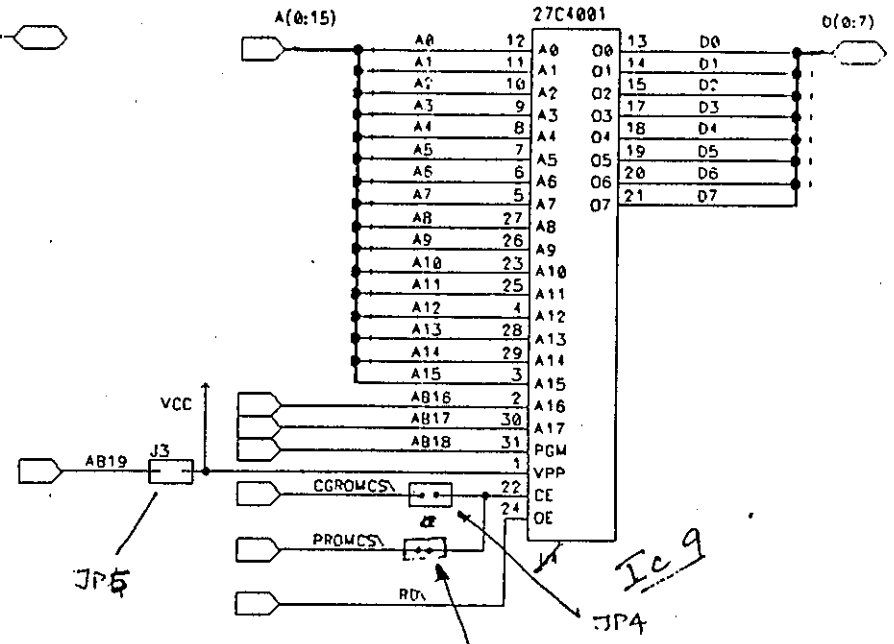
MEMORY IC [EPROM]

MAIN PCB CIRCUIT CARD			
MEMORY CKT		ISSUE: 4	REV: 0
DWG NO:		DATE: 25-05-98	
CHKD:	APPD:	SHEET: 2	OF: 10
TVSE BANGALORE	SCH: JOSY VER: BHAT	D'OPPO SYSTEMS (P) LTD. PH: 5282107/5254401	

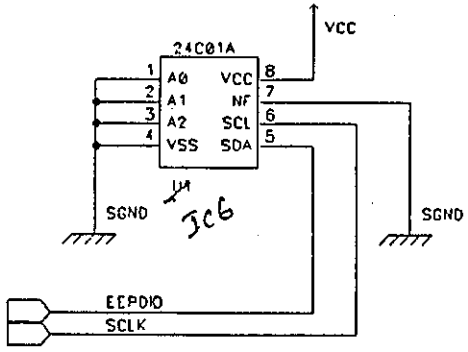
/USER/PCB/CM4/2.DRW 25 MAY 98 19:04 last update: 25 MAY 98 19:01



[RAM]



OPTIONAL ROM.



EEPROM.

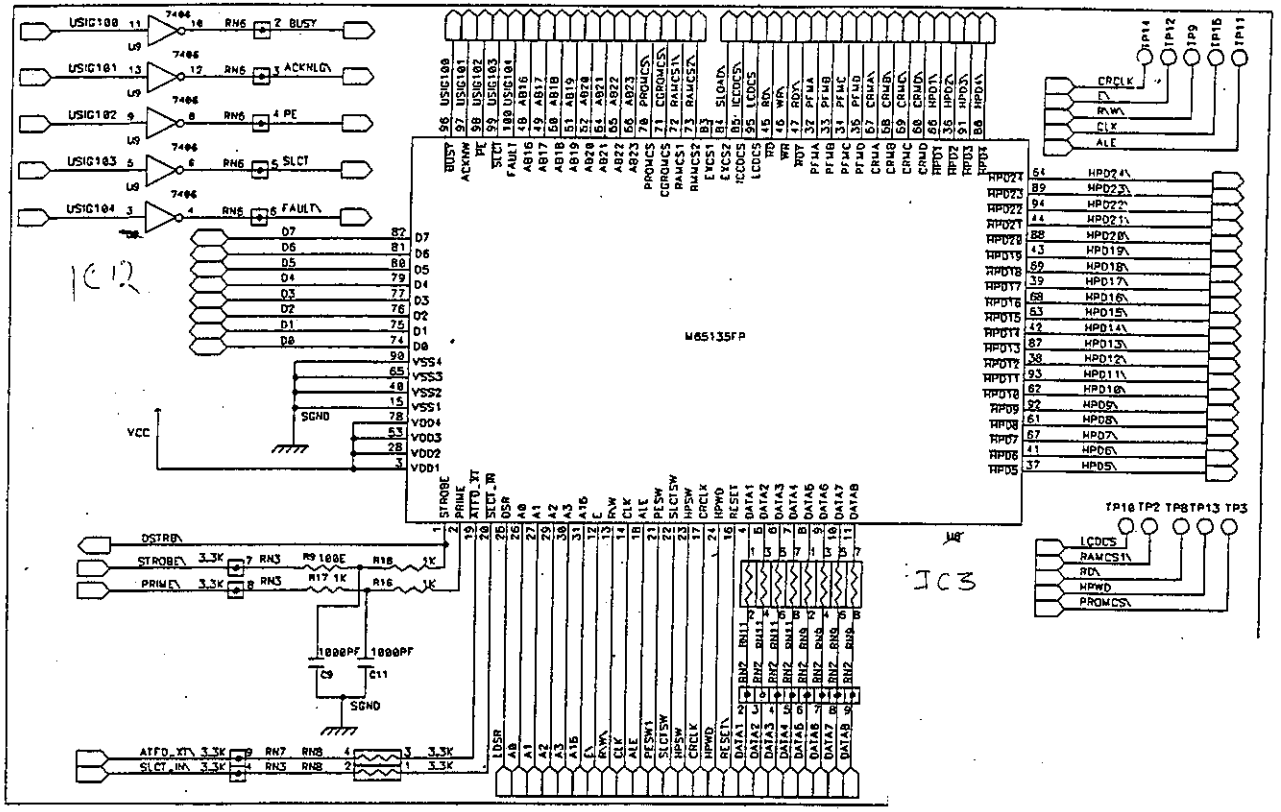
3

MAIN PCB CIRCUIT CARD		
MEMORY CKT		ISSUE: 4 REV: 0
DWG NO:		DATE: 25-05-98
CHKD:	APPD:	SHEET: 2 OF: 10
TVSE BANGALORE	SOH: JOSY VER: BHAT	ODPRD SYSTEMS (P) LTD. PH: 5282107/5254401

PRINTER

MSβ 345

(4)



GATE ARRAY

REVISION	REF No.	ZONE	MODIFICATION DETAILS	CHKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	P575268				22.10.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

TVS ELECTRONICS — TVS ELECTRONICS LIMITED

NUMBER: 1S161454

SIZE: A3

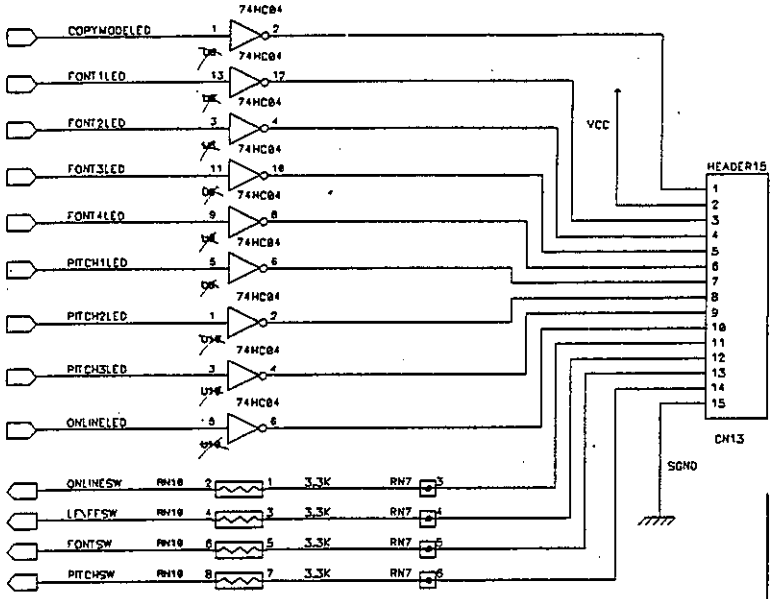
SCALE: NTS

SHEET: 1 OF 10

REVISION: B

PRINTER
MSP 345

(IC10 & IC11)



OPERATION PANEL I/F

REVISION	REF No.	ZONE	MODIFICATION DETAILS	CHKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	9575268		REFER ECN NO. 9575268		12-12-97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454
FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97	
CHECKED	V.BABU	25.7.97	
APPROVED	M.R.NAIR	25.7.97	

TVS ELECTRONICS LIMITED

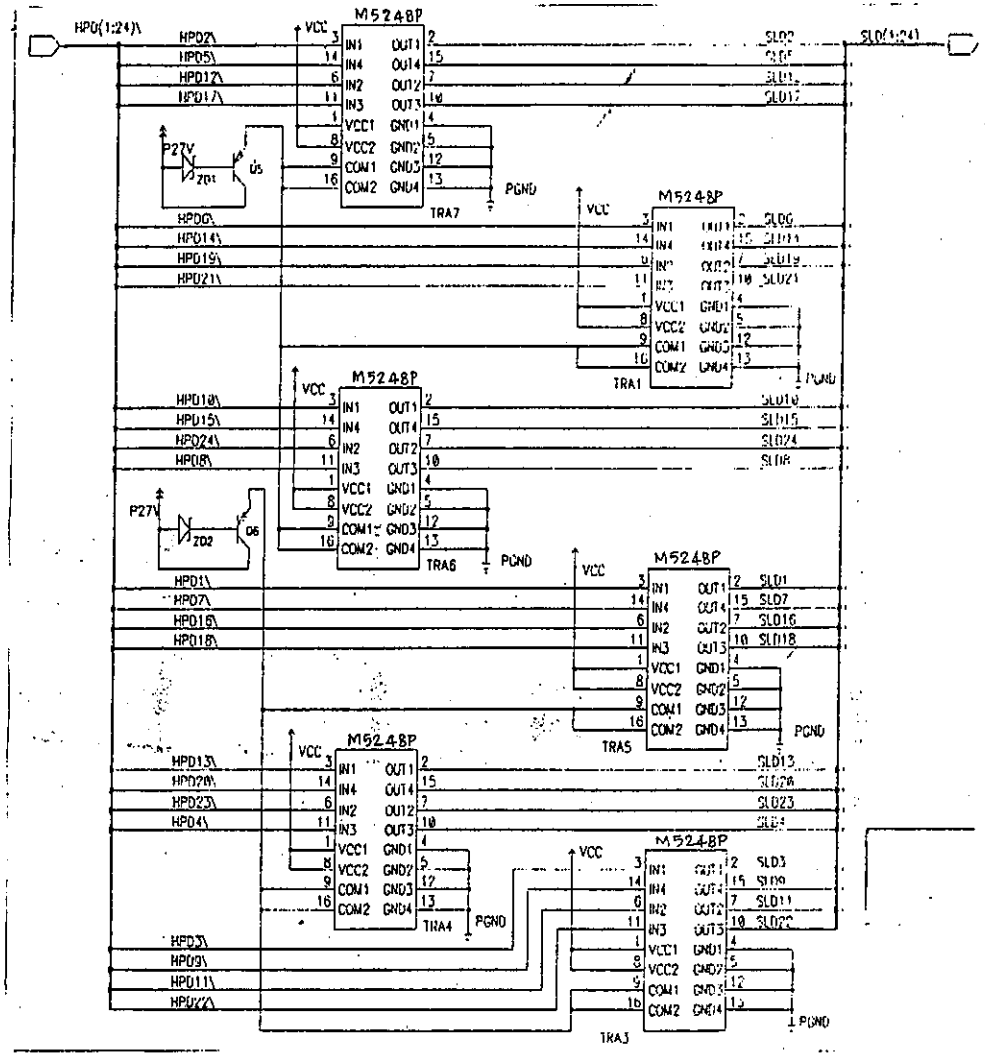
NUMBER 1S161454 SIZE A3

SCALE NTS SHEET 4 OF 10 REVISION B

(5)

(6)

PRINTER
MSP 345



HEAD PIN DRIVER

REVISION	REF No.	ZONE	MODIFICATION DETAILS	CHKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	9575268		REFER ECN No. 9575268.		22.12.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

TVS ELECTRONICS LIMITED

NUMBER: 1S161454

SIZE: A3

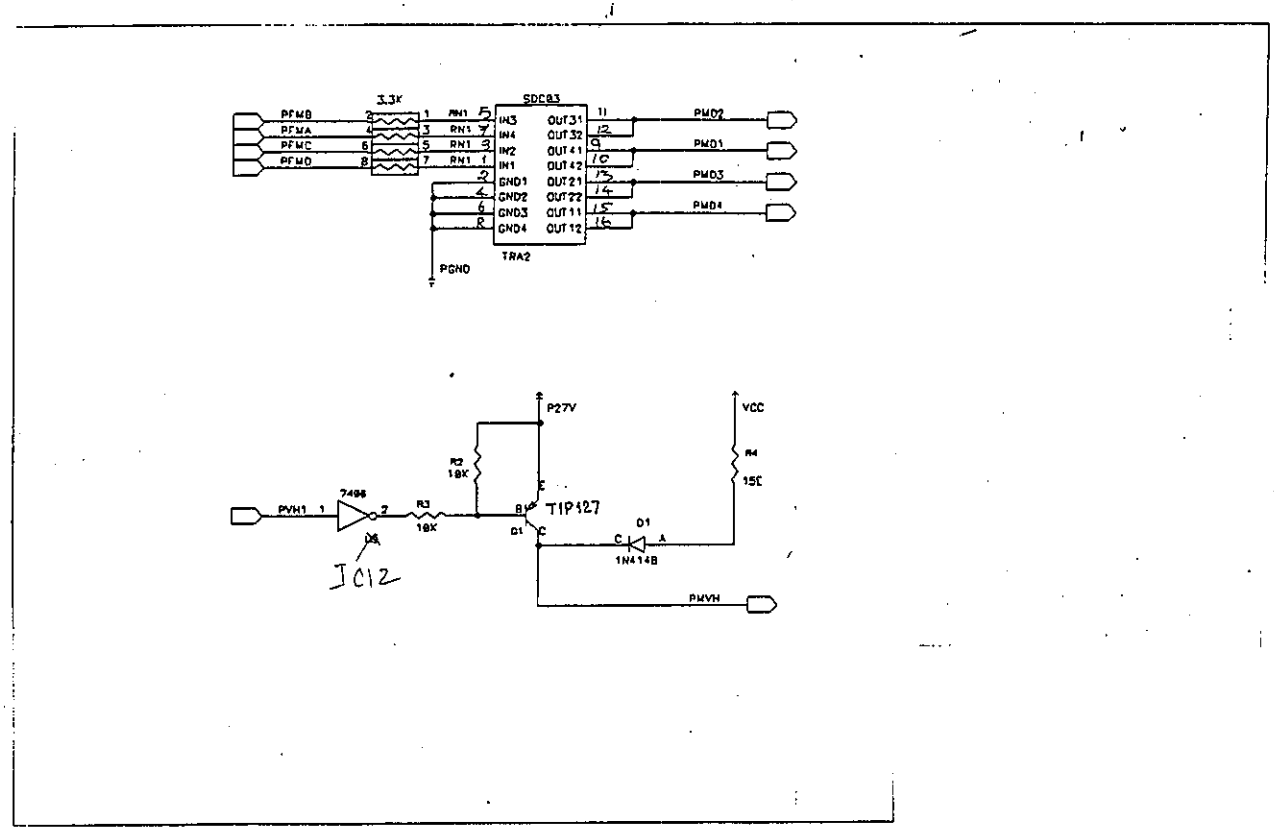
SCALE: NTS

SHEET 5 OF 10

REVISION: B

PRINTER

MSP 345



PF MOTOR DRIVER

REVISION	REF No.	ZONE	MODIFICATION DETAILS	DRD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	9575268		REPER ECN No. 9575268.		22.12.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97	
CHECKED	V.BABU	25.7.97	
APPROVED	M.R.NAIR	25.7.97	

TVS ELECTRONICS LIMITED

NUMBER: 1S161454

SIZE: A3

SCALE: NTS

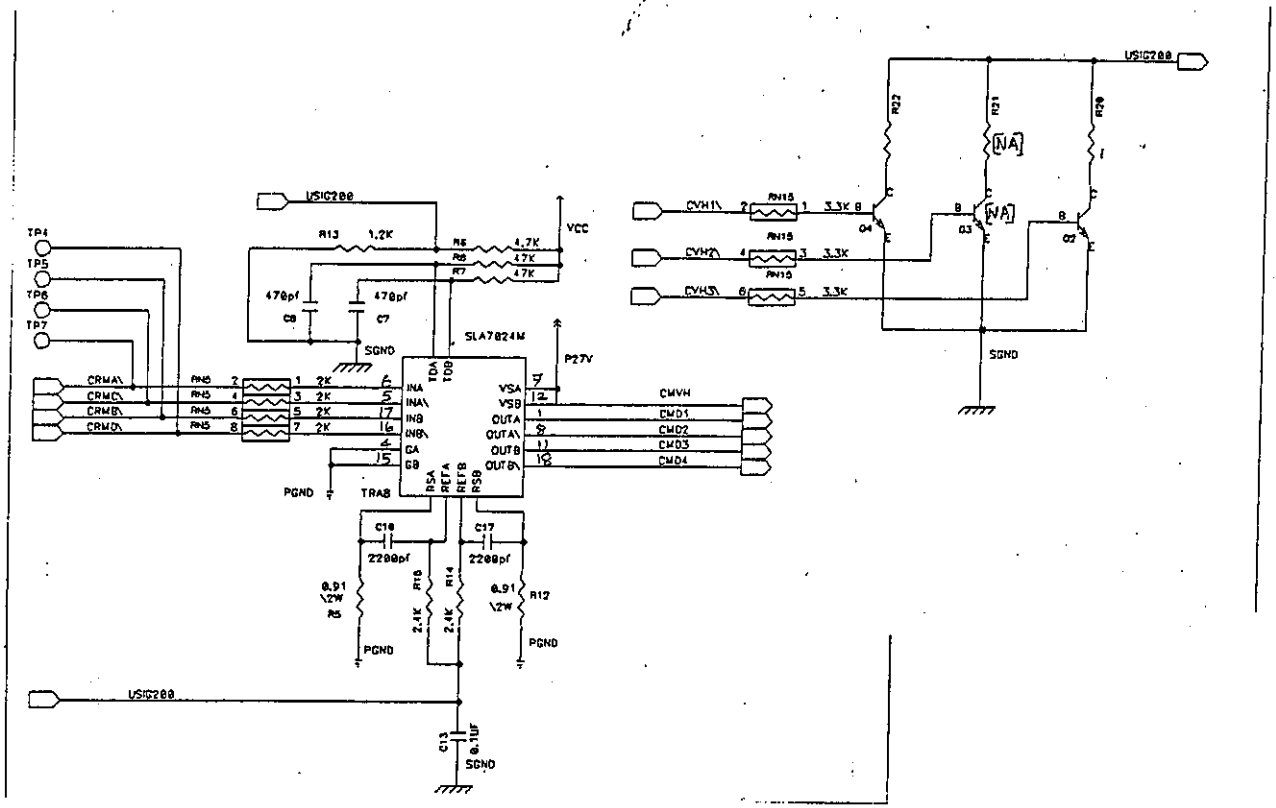
SHEET: 5 OF 10

REVISION: B

(7)

8

PRINTER
MSR 345



CARRIAGE MOTOR DRIVER

REVISION	REF No.	ZONE	MODIFICATION DETAILS	CHKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B	9575268		REFER ECN No. 9575268.		12.11.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

TVS ELECTRONICS LIMITED

NUMBER 1S161454

SIZE A3

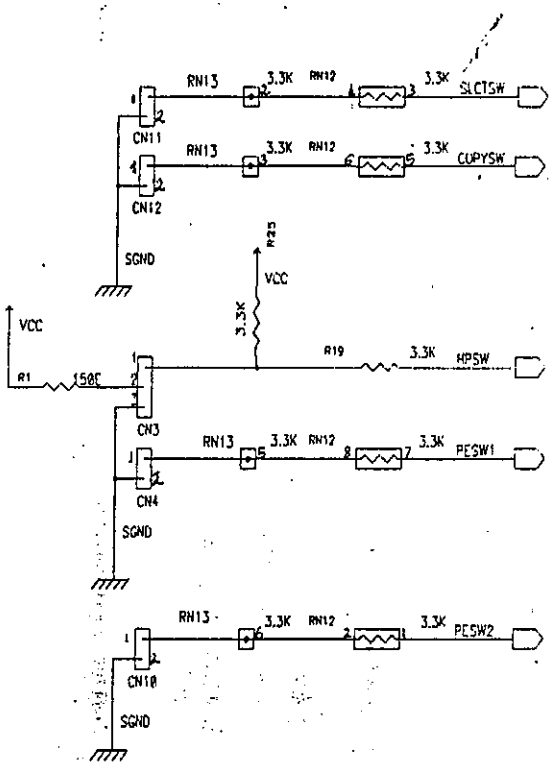
SCALE NTS

SHEET 7 OF 10

REVISION B

PRINTER

MSP 345



SENSOR

REVISION	REF No.	ZONE	MODIFICATION DETAILS	DRKD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B.	9575268		REFER ECN No. 9575268.		22.12.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

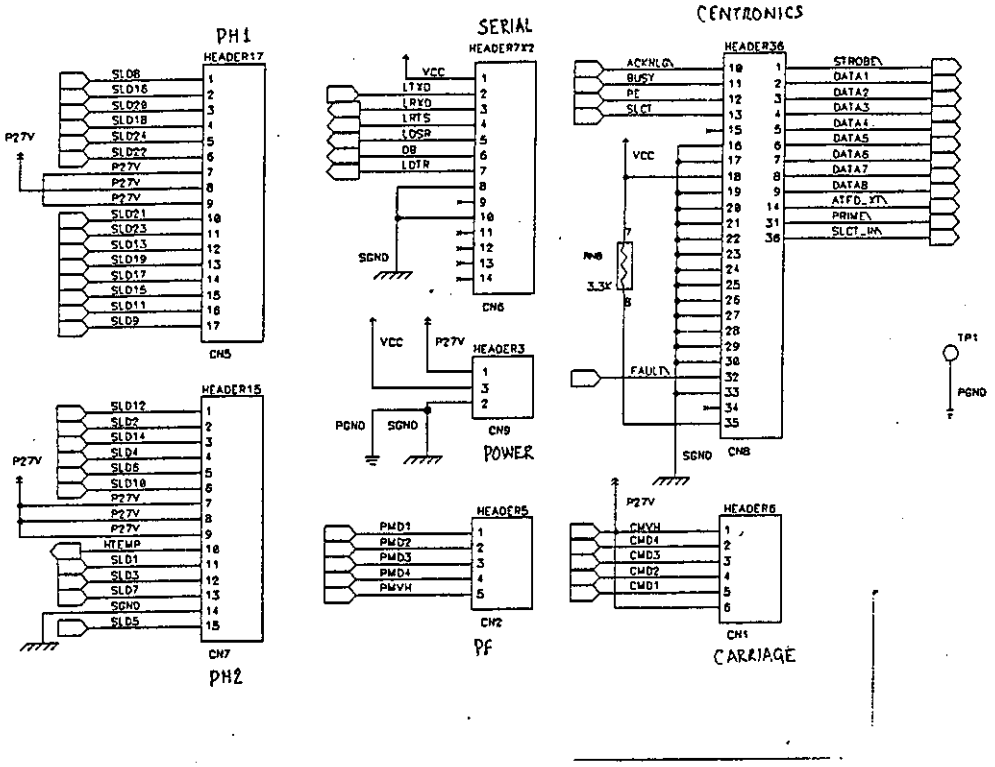
TVS ELECTRONICS TVS ELECTRONICS LIMITED

NUMBER 1S161454 SIZE A3

SCALE NTS SHEET 8 OF 10 REVISION B

(9)

10



CONNECTORS

REVISION	REF No.	ZONE	MODIFICATION DETAILS	DRD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B.	9575268		REFER ECN No. 9575268.		20.12.96			
A	PD395		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

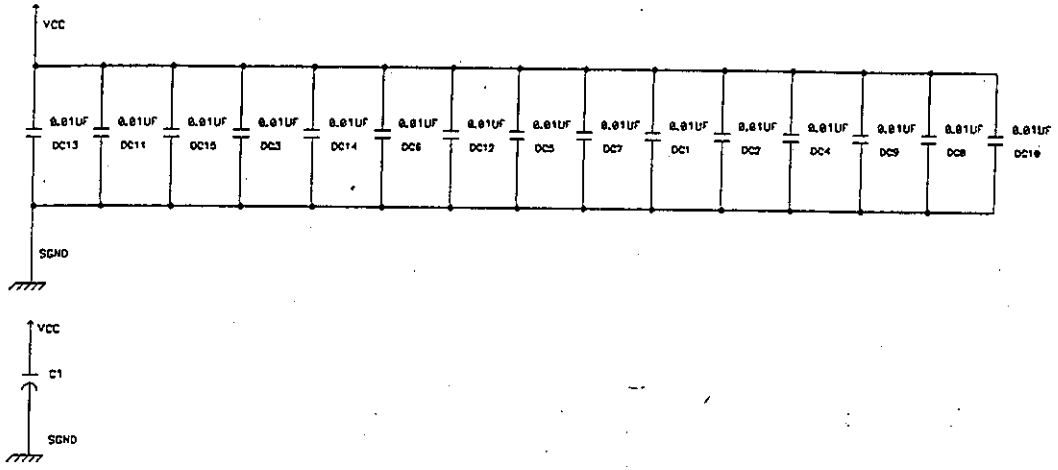
ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

TVS ELECTRONICS — TVS ELECTRONICS LIMITED

NUMBER: 1S161454 | SIZE: A3 | SCALE: NTS | SHEET 9 OF 10 | REVISION: B

PRINTER
MSR 345



DECAPS

REVISION	REF No.	ZONE	MODIFICATION DETAILS	DWD	DATE	APPD.	NEXT ASSEMBLY	ITEM
B.	957528		REFER ECN No. 957528.		20.12.97			
A	PD335		FIRST ISSUED		25.7.97			

MATERIAL: AS PER PARTS LIST 1A161454

FINISH:

TITLE: SCHEMATIC DIAGRAM, MAIN PCB SA (WITH ROM)

ALL DIMENSIONS IN MM

DRAWN	J.S.UMESHA	24.7.97
CHECKED	V.BABU	25.7.97
APPROVED	M.R.NAIR	25.7.97

TVS ELECTRONICS LIMITED

NUMBER: 1S161454 SIZE: A3

SCALE: NTS SHEET: 10 OF 10 REVISION: B

11