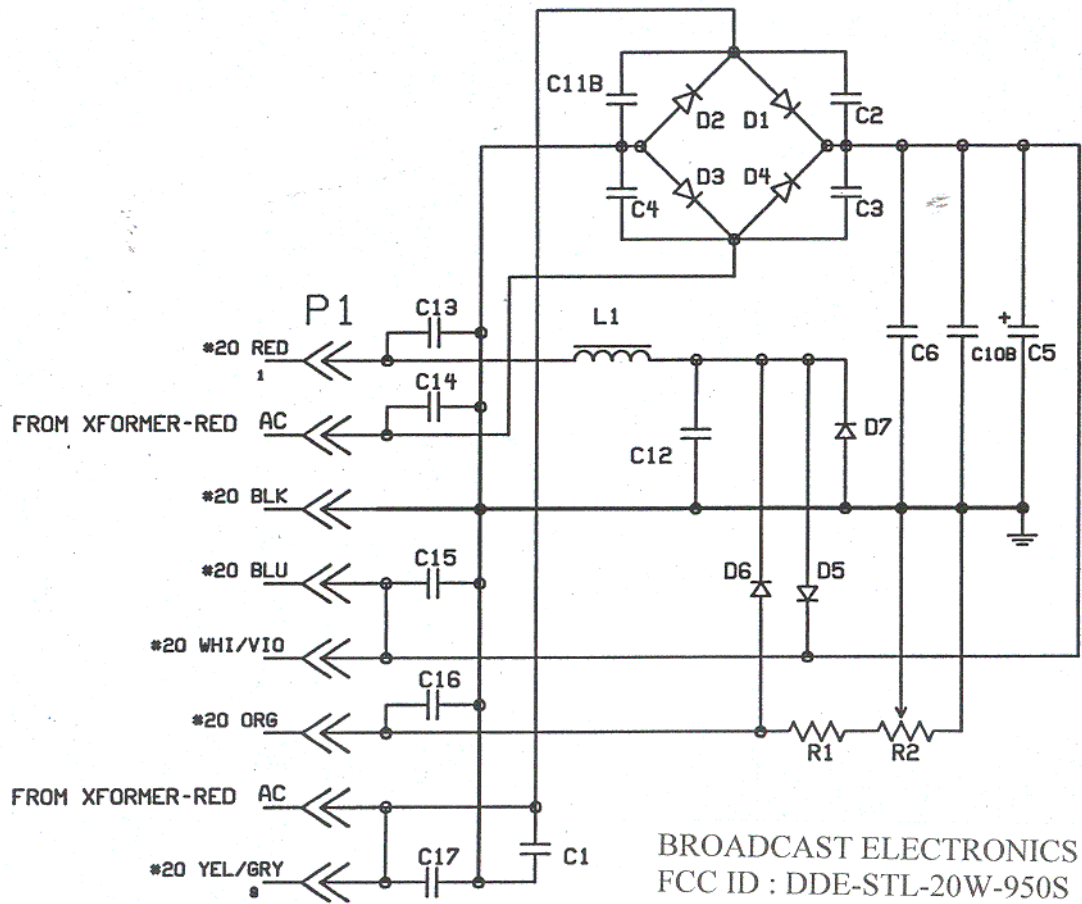


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	DESIGNED BY	FRAMES	
	ENGL. LEADER	TYPE SIZE DRW. NO.	
	MFG.	DATE MADE	
TOLERANCE (DECIMAL) IS 0.1.			TITLE WIRING DIAGRAM STL-20C MAIN FRAME
± 0.010 ANGLES ± 1°			SCALE STL-20C
			PART NO. 903-6020
			REV 1
			SHEET 1 OF 1

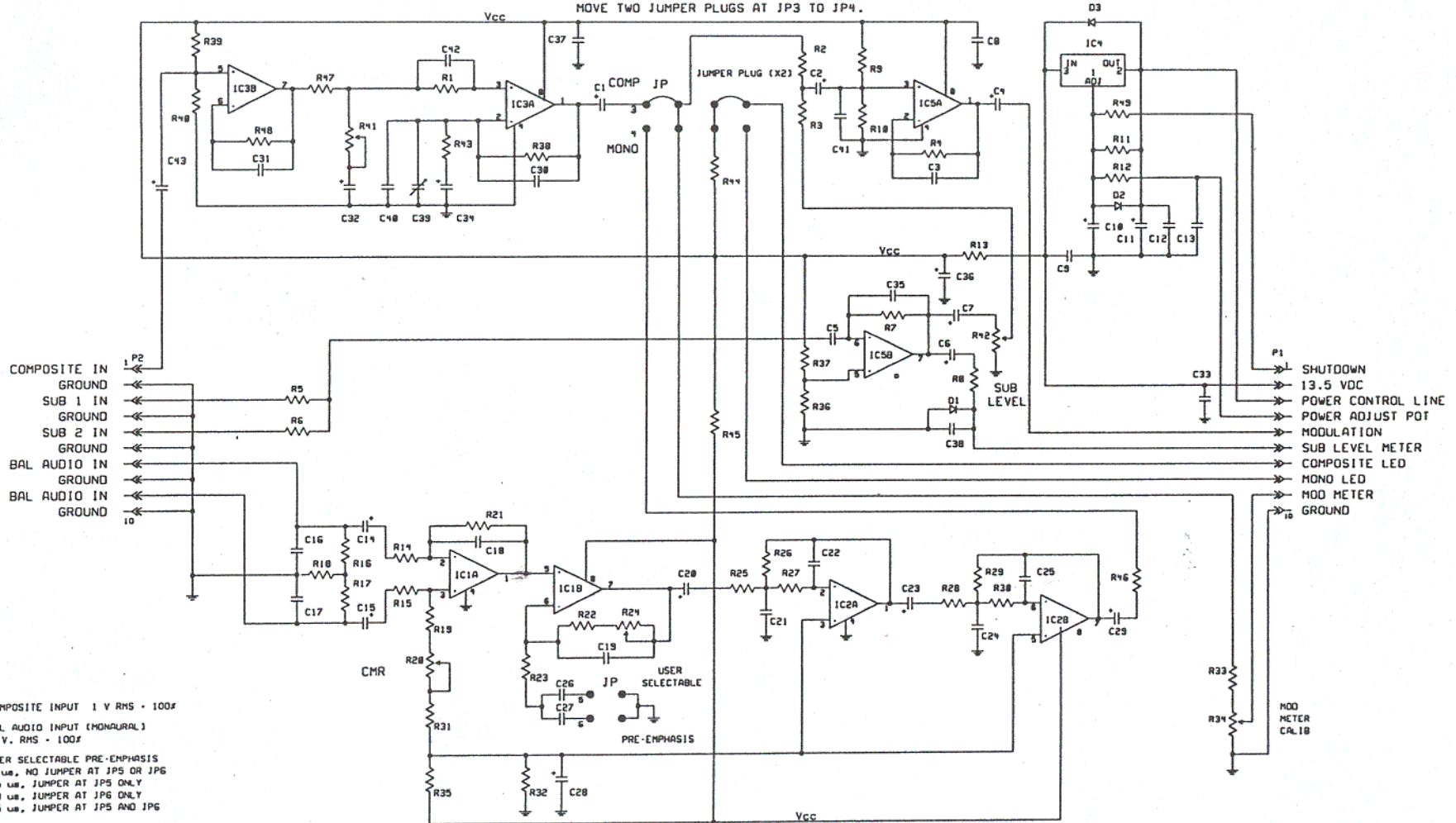
BROADCAST ELECTRONICS
 FCC ID : DDE-STL-20W-950S
 JOB # : 250U1
 EXHIBIT # : **4A**



BROADCAST ELECTRONICS
 FCC ID : DDE-STL-20W-950S
 JOB # : 250U1
 EXHIBIT # : 4B

<p>MARTI ELECTRONICS CLEBURNE, TX 76033-0661</p>	<p>DRAWING NO. COPYRIGHT 800-168 08-JUL-96</p>	<p>TITLE POWER SUPPLY BOARD</p>
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TO CONVERT FROM COMPOSITE TO MONO,
MOVE TWO JUMPER PLUGS AT JP3 TO JP4.

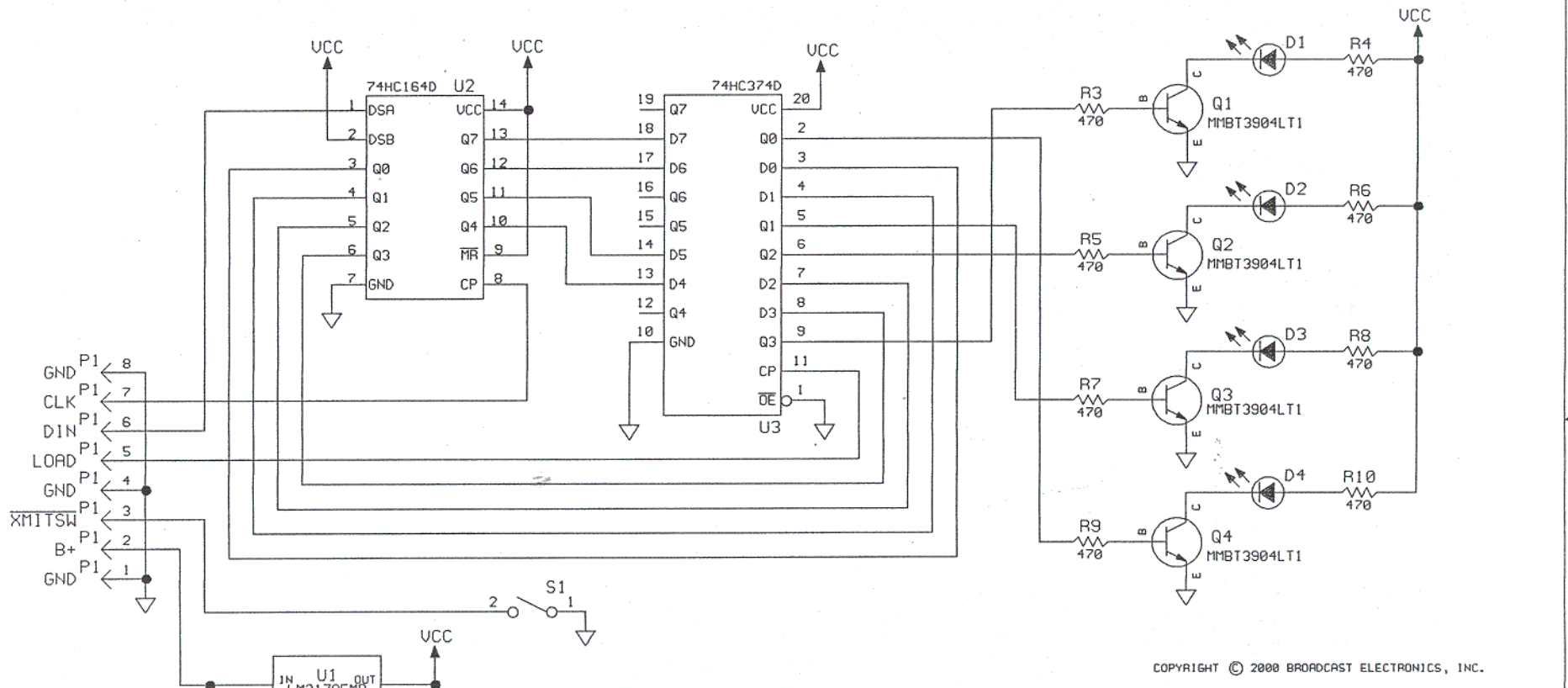


NOTE

1. COMPOSITE INPUT 1 V RMS - 100%
2. BAL AUDIO INPUT (MONAURAL) 1 V. RMS - 100%
3. USER SELECTABLE PRE-EMPHASIS
0 uS, NO JUMPER AT JP5 OR JP6
25 uS, JUMPER AT JP5 ONLY
50 uS, JUMPER AT JP6 ONLY
75 uS, JUMPER AT JP5 AND JP6
4. LAST USED COMPONENTS
LAST CAPACITOR - C43
LAST RESISTOR - R49
LAST DIODE - D3
LAST IC - IC5

<p>MARTI ELECTRONICS CLEBURNE, TX 76033-0661</p>	<p>DRAWING NO. COPYRIGHT 800-285 08-MAR-95</p>	<p>TITLE STL-15C AUDIO PROCESSING BOARD</p>
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REVISIONS			DRAFTER	APPROVED	ECN
REV	DATE	DESCRIPTION			
1	11-1-00	PROTOTYPE RELEASE	KT		---



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TOLERANCE (DECIMAL) U.O.S.
 .x ± .030 .xxx ± .005
 .xx ± .015 ANGLES ± 1°

DESIGNED BY
 KT 11-1-00
 DESIGNER(S)
 PROJ. LEADER
 MFG.

MATERIAL
 SEE BOM
 FINISH
 SEE DWG REF 92-0000
 NEXT ASSY.

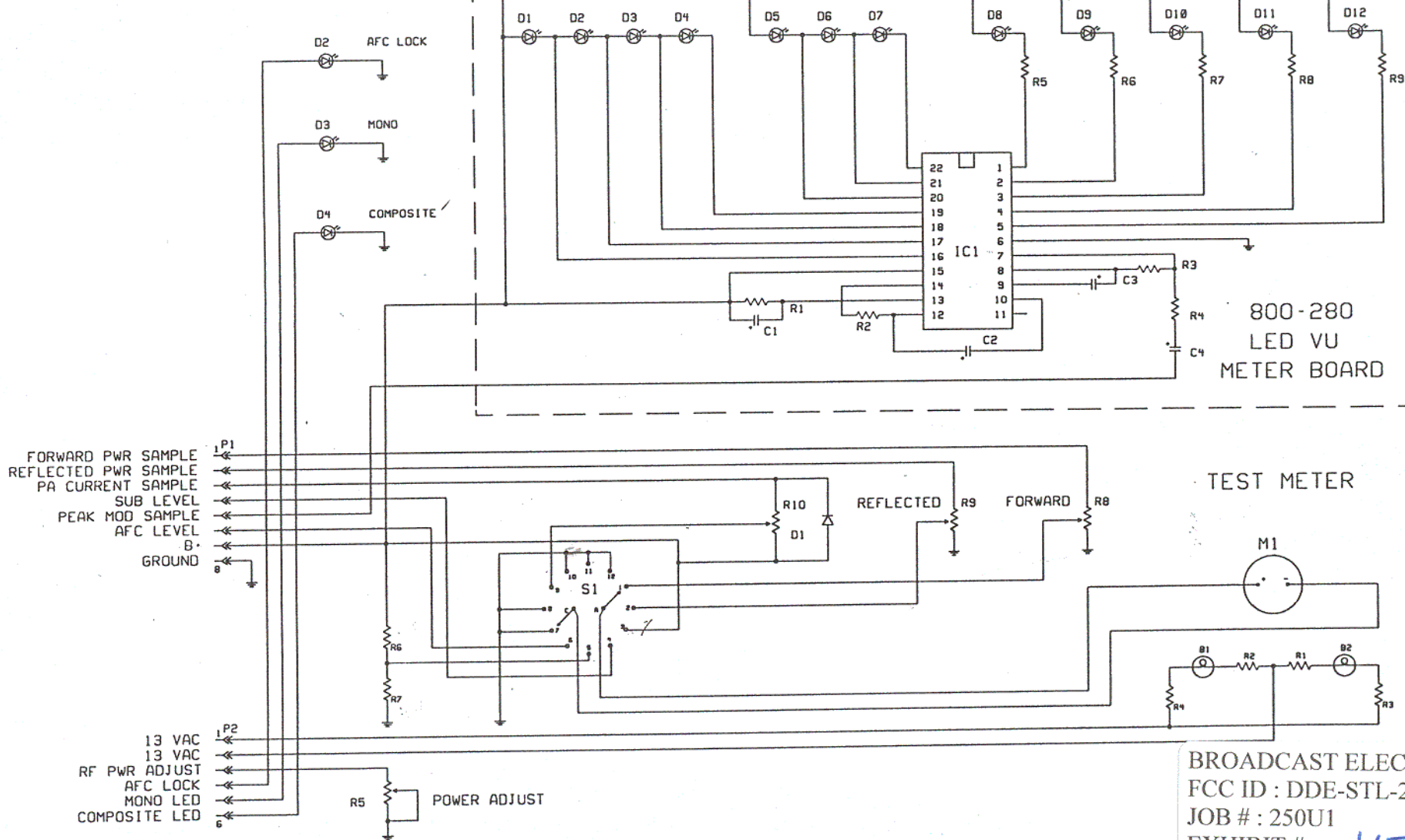
BE BROADCAST ELECTRONICS INC.
 4130 N. 24TH ST., P.O. BOX 3686 QUINCY, IL. 62305 217/224-9600
 TELEX 250142 CABLE BROADCAST FAX 217/224-9607

TITLE
 STL-15C ALARM CONTROL BOARD

TYPE	SIZE	DWG. NO.	REV
S	B	800-376B	1

MODEL _____ SCALE _____ SHEET 1 OF 1

FRONT PANEL
LED INDICATORS



800-280
LED VU
METER BOARD

TEST METER

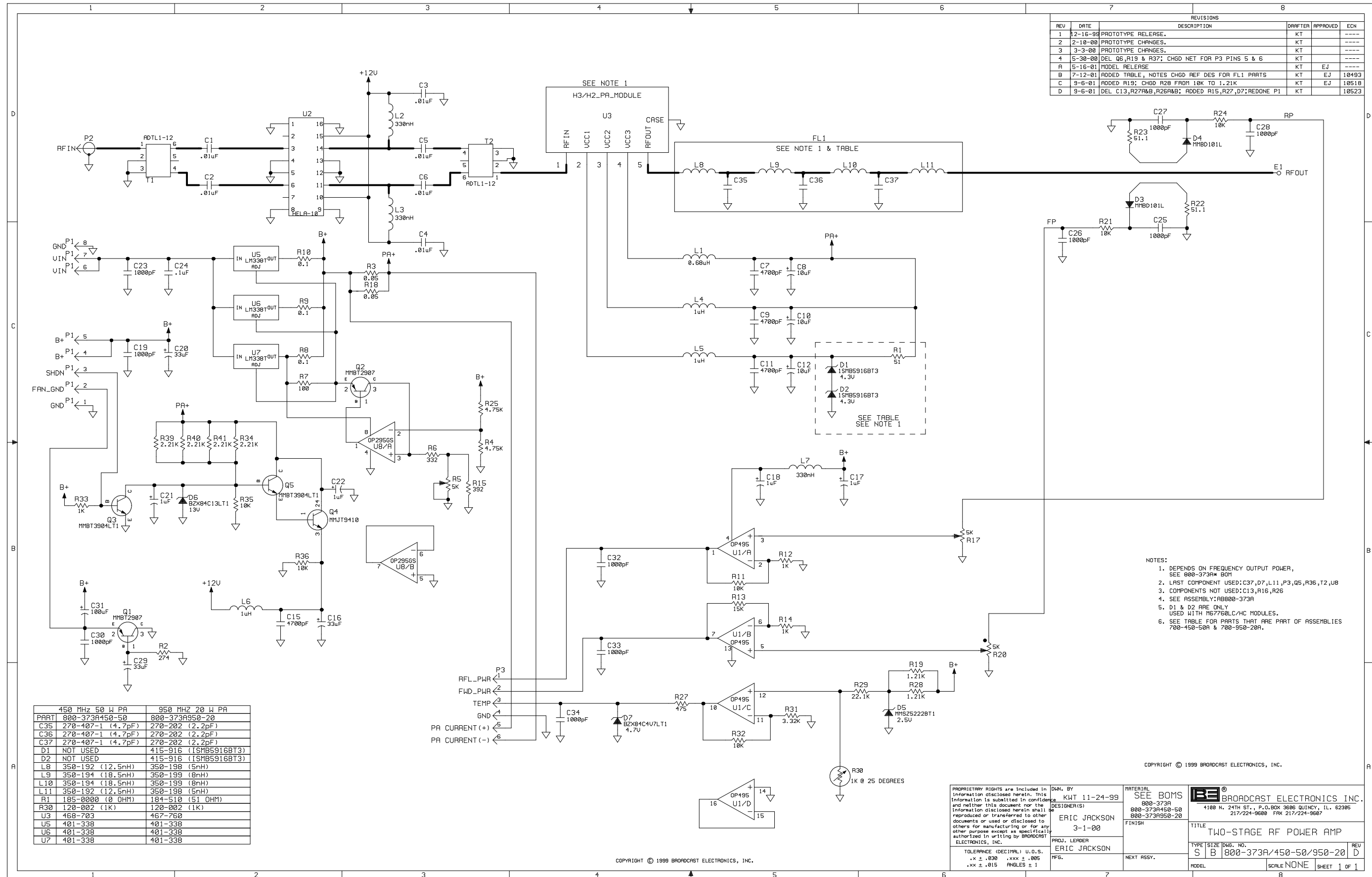
BROADCAST ELECTRONICS
FCC ID : DDE-STL-20W-950S
JOB # : 250U1
EXHIBIT # : *4E*

MARTI ELECTRONICS
CLEBURNE, TX 76033-0661

DRAWING NO. 800-290
COPYRIGHT 08-MAR-95
INCLUDES 800-280

TITLE
STL-15C METER BOARD

REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	2-16-99	PROTOTYPE RELEASE.	KT		----
2	2-18-00	PROTOTYPE CHANGES.	KT		----
3	3-3-00	PROTOTYPE CHANGES.	KT		----
4	5-30-00	DEL Q6,R19 & R37; CHGD NET FOR P3 PINS 5 & 6	KT		----
A	5-16-01	MODEL RELEASE	KT	EJ	----
B	7-12-01	ADDED TABLE, NOTES CHGD REF DES FOR FL1 PARTS	KT	EJ	10493
C	9-6-01	ADDED R19; CHGD R28 FROM 10K TO 1.21K	KT	EJ	10518
D	9-6-01	DEL C13,R27R&B,R26R&B; ADDED R15,R27,D7; REDONE P1	KT		10523



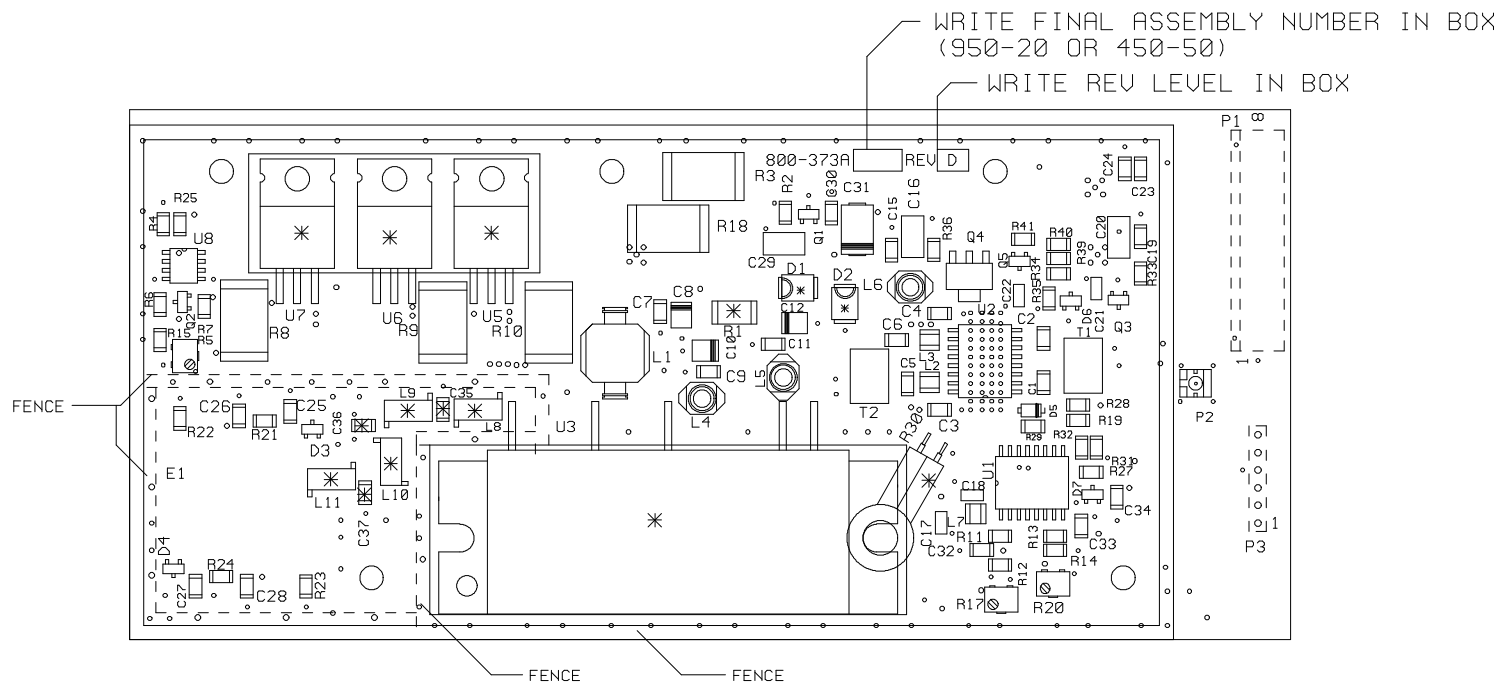
	450 MHz 50 W PA	950 MHz 20 W PA
PART	800-373A450-50	800-373A950-20
C35	270-407-1 (4.7pF)	270-202 (2.2pF)
C36	270-407-1 (4.7pF)	270-202 (2.2pF)
C37	270-407-1 (4.7pF)	270-202 (2.2pF)
D1	NOT USED	415-916 (1SMBS916BT3)
D2	NOT USED	415-916 (1SMBS916BT3)
L8	350-192 (12.5nH)	350-198 (5nH)
L9	350-194 (18.5nH)	350-199 (8nH)
L10	350-194 (18.5nH)	350-199 (8nH)
L11	350-192 (12.5nH)	350-198 (5nH)
R1	185-0000 (0 OHM)	184-510 (S1 OHM)
R30	120-002 (1K)	120-002 (1K)
U3	468-703	467-760
U5	401-338	401-338
U6	401-338	401-338
U7	401-338	401-338

- NOTES:
- DEPENDS ON FREQUENCY OUTPUT POWER, SEE 800-373A* BOM
 - LAST COMPONENT USED: C37, D7, L11, P3, Q5, R36, T2, U8
 - COMPONENTS NOT USED: C13, R16, R26
 - SEE ASSEMBLY: AB800-373A
 - D1 & D2 ARE ONLY USED WITH M67760LC/HC MODULES.
 - SEE TABLE FOR PARTS THAT ARE PART OF ASSEMBLIES 700-450-50A & 700-950-20A.

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MATERIAL SEE BOMS 800-373A 800-373A450-50 800-373A950-20	FINISH		TITLE TWO-STAGE RF POWER AMP		
4100 N. 24TH ST., P.O. BOX 3686 QUINCY, IL. 62395 217/224-9600 FAX 217/224-9607		TYPE S		SCALE NONE	SHEET 1 OF 1

REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	1/4/00	PROTOTYPE RELEASE	KWT		----
2	2/15/00	PROTOTYPE CHANGES	KWT		----
3	3/9/00	PROTOTYPE CHANGES	KWT		----
4	5-30-00	DELETED Q6,R19 & R37; MOVED R3.	KWT		----
A	2-13-01	CHGD P1 & P3, ADDED A9C ASSEMBLY: ENG. RELEASE	KWT	EJ	10426
B	8-16-01	CHGD REF DES FOR FL1 PARTS, ADDED NOTES	KWT	EJ	10493
C	9-6-01	ADDED R19; CHGD R28 FROM 10K TO 1.12K	KWT	EJ	10518
D	9-6-01	ADDED D7,R15,R27;DEL R27A&B,R26A&B,C13;CHGD P1	KWT		10523



NOTES:

- 1) SEE SCHEMATIC: SB800-373A
- 2) * INDICATES PARTS STUFFED DURING ASSEMBLIES 800-373A450-50 & 800-373A950-20 SEE TABLE BELOW.

	450 MHz 50 W PA	950 MHz 20 W PA
PART	800-373A450-50	800-373A950-20
C35	270-407-1 (4.7pF)	270-202 (2.2pF)
C36	270-407-1 (4.7pF)	270-202 (2.2pF)
C37	270-407-1 (4.7pF)	270-202 (2.2pF)
D1	NOT USED	415-916 (ISMB5916BT3)
D2	NOT USED	415-916 (ISMB5916BT3)
L8	350-192 (12.5nH)	350-198 (5nH)
L9	350-194 (18.5nH)	350-199 (8nH)
L10	350-194 (18.5nH)	350-199 (8nH)
L11	350-192 (12.5nH)	350-198 (5nH)
R1	185-000 (0 OHM)	184-510 (51 OHM)
R30	120-002 (1K)	120-002 (1K)
U3	468-703	467-760
U5	401-338	401-338
U6	401-338	401-338
U7	401-338	401-338

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TOLERANCE (DECIMAL) U.O.S.
 .X ± .030 .XXX ± .005
 .XX ± .015 ANGLES + 1°

DWN. BY
KWT 12-1-99

DESIGNER(S)

PROJ. LEADER
ERIC JACKSON

MFG.

MATERIAL
SEE BOMS
800-373A
800-373A450-50
800-373A950-20

FINISH

NEXT ASSY.
700-450-50
700-950-20

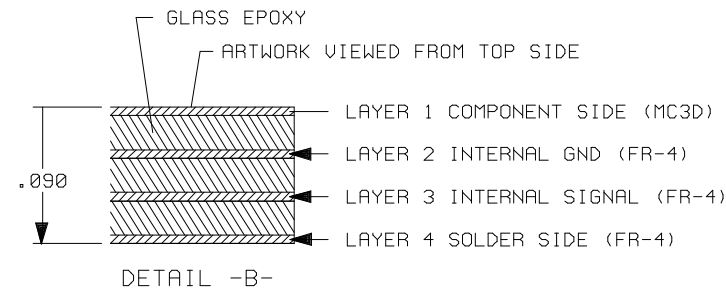
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BE BROADCAST ELECTRONICS INC.
 4100 N. 24TH ST. P.O. BOX 3606 QUINCY, IL. 62305
 217/224-9600 FAX 217/224-9607

TITLE
TWO-STAGE RF POWER AMP

TYPE	SIZE	DWG No.	REV
A	B	800-373A/450-50/950-20	D

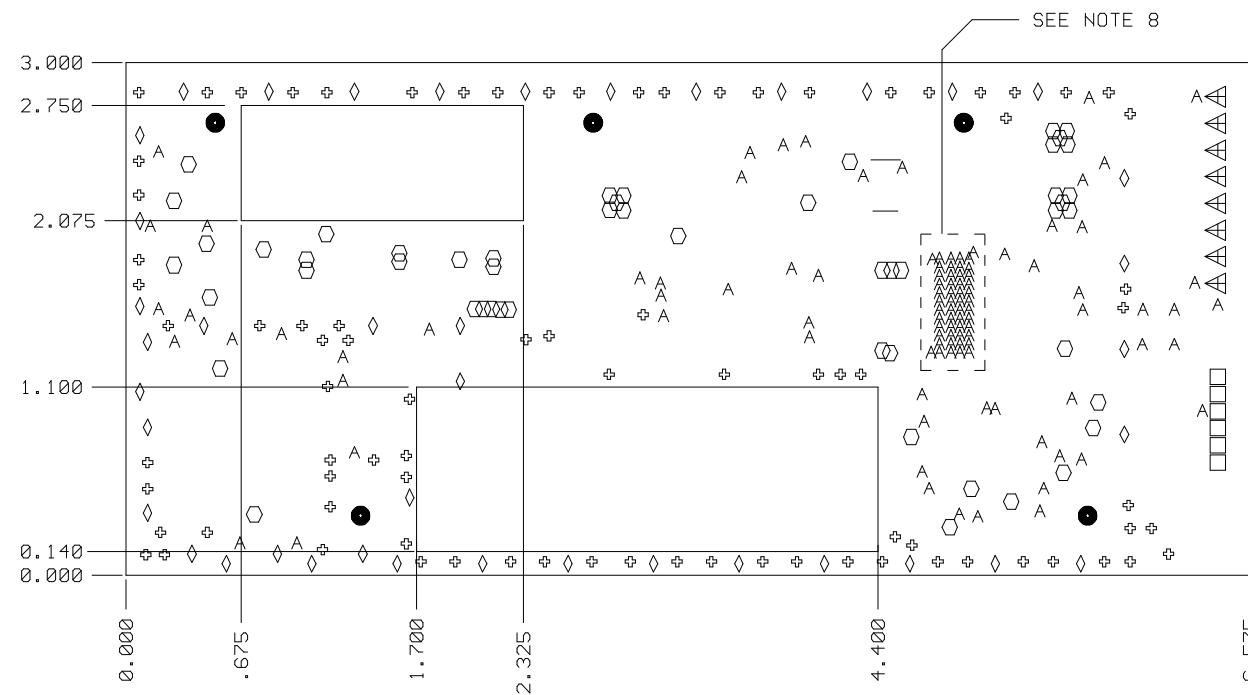
MODEL NNNN SCALE 1/1 SHEET 1 OF 1



REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	1-4-00	PROTOTYPE RELEASE	KWT		----
2	2-11-00	PROTOTYPE CHANGES	KWT		----
3	3-9-00	PROTOTYPE CHANGES	KWT		----
4	5-30-00	PROTOTYPE CHANGES	KWT		----
A	2-13-01	CHGD 0.015 VIAS TO 0.033; ADDED .375" TO BOARD	KWT	EJ	10426
B	8-16-01	MADE SOME PADS BIGGER, CHGD SILKSCREEN & MASK	KWT	EJ	10493
C	9-6-01	DEL 1 .025 HOLE, CHGD TOP SIDE, ADD NOTE 9	KWT	EJ	10518
D	9-6-01	CHGD ALL LAYERS	KWT		10523

NOTES:

- P IN HOLECHART TABLE INDICATES PLATED THRU HOLES; -N OR * INDICATES NON-PLATED-THRU HOLES; ALL HOLES FINISHED SIZE AS SHOWN.
- MATERIAL: 0.090 IN. FIBERGLASS REINFORCED EPOXY, NEMA GRADE FR-4/MC3D, NATURAL COLOR WITHOUT OPAQUER; 2 OZ. COPPER CLAD BOTH SIDES. THE PRINTED WIRING BOARD MATERIAL MUST HAVE A COMPARATIVE TRACKING INDEX (CTI) OF AT LEAST 175 AND A SUITABLE FLAMMABILITY RATING.
- FINISH: SELECTIVE SOLDER/HOT AIR LEVELED.
- APPLY GREEN SOLDERMASK OVER BARE COPPER, COMPONENT SIDE ONLY.
- TO BE SILKSCREENED WHITE ON COMPONENT-SIDE PER "SILKSCREEN" ARTWORK.
- CIRCUIT BOARD TO BE ELECTRICALLY TESTED BY VENDOR FOR TRACE CONTINUITY AND PROOF AGAINST TRACE SHORTS.
- ALL 0.033 HOLES ARE BLIND VIA'S, THEY ARE OPEN ON LAYERS 1,2 & 3 NOT LAYER 4, ALL OF THEM SHOULD BE SOLDER FILLED.
- ALL .025 MIL VIAS IN DASHED BOXES, SHOULD BE SOLDER FILLED: (51 TOTAL)
- G ON THE INT GROUND PLANE INDICATES HOLE TIED TO GROUND.



SYM	HOLE SIZE	QTY
△	.025-P	111
⊕	.028-P	83
○	.033-P	52
□	.036-P	6
◇	.041-P	41
▲	.067-P	8
●	.136-P	5

SEE NOTE 7

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	DESIGNER(S)		4100 N. 24TH ST. P.O. BOX 3606 QUINCY, IL. 62305 217/224-9600 FAX 217/224-9607	
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°	PROJ. LEADER ERIC JACKSON	FINISH SEE NOTES 1 & 3-8	TITLE TWO-STAGE RF POWER AMP	
	MFG.	NEXT ASSY.	TYPE M SIZE B DWG No. 800-373B	REV D
			MODEL NNNN	SCALE 1/1 SHEET 1 OF 1