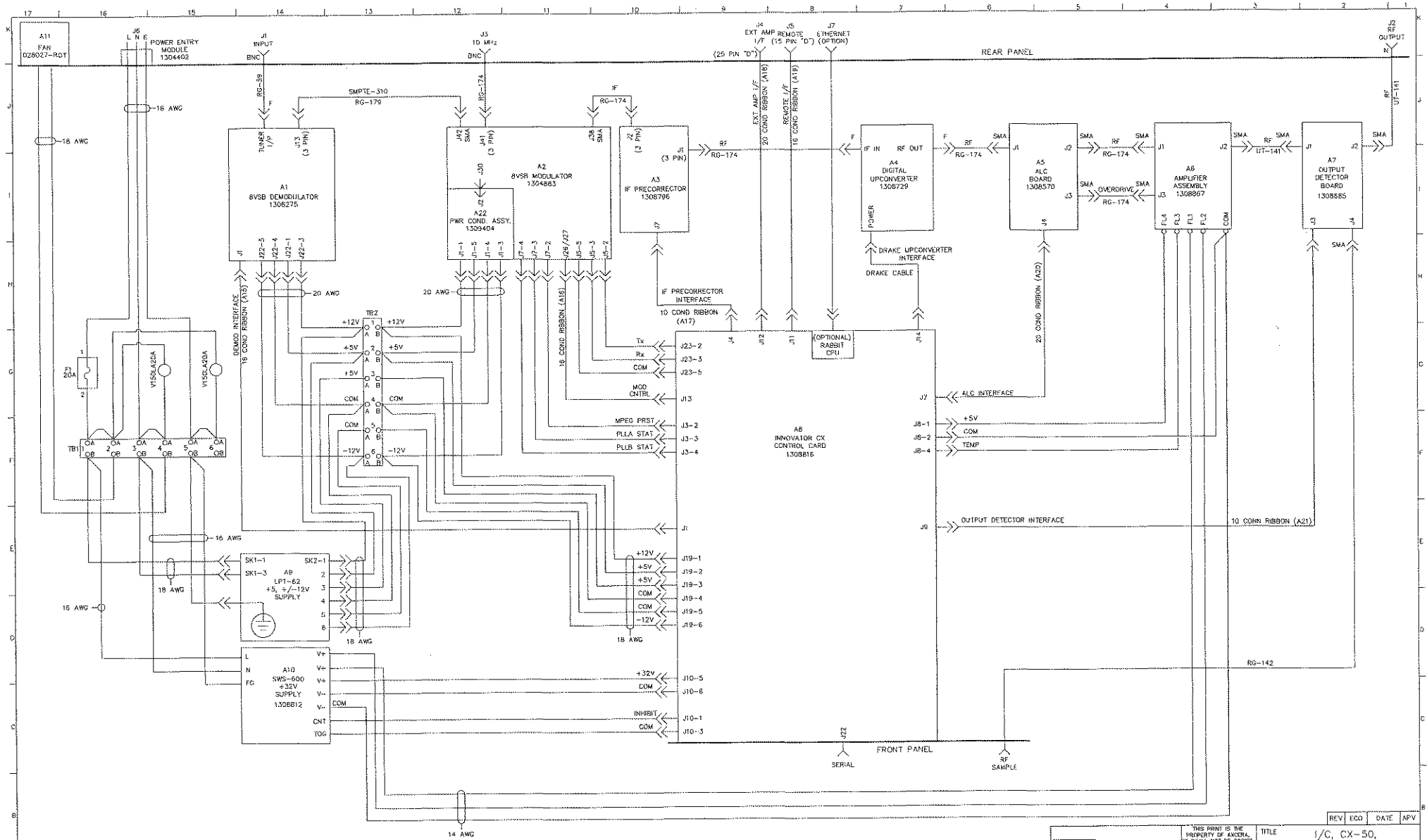
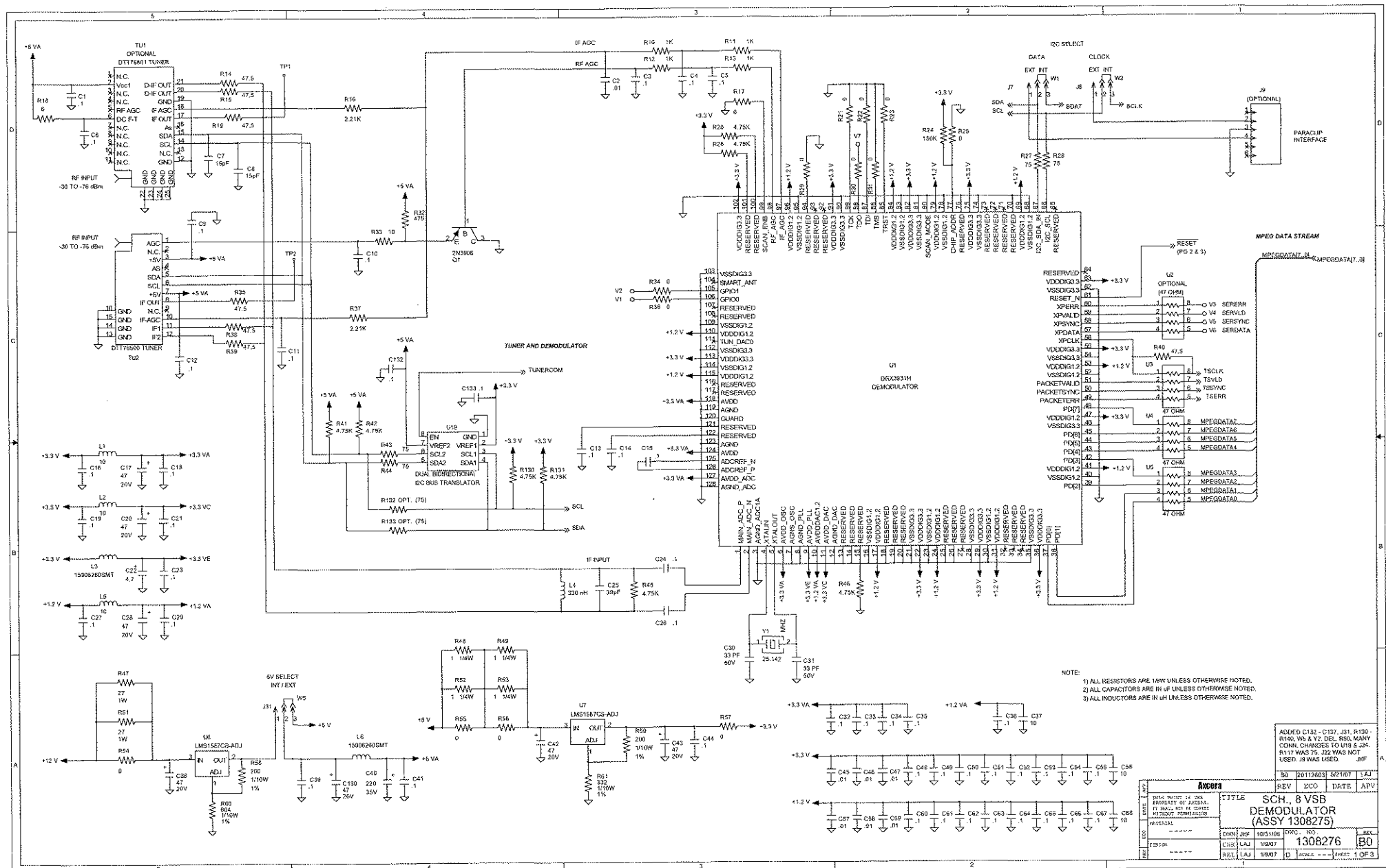
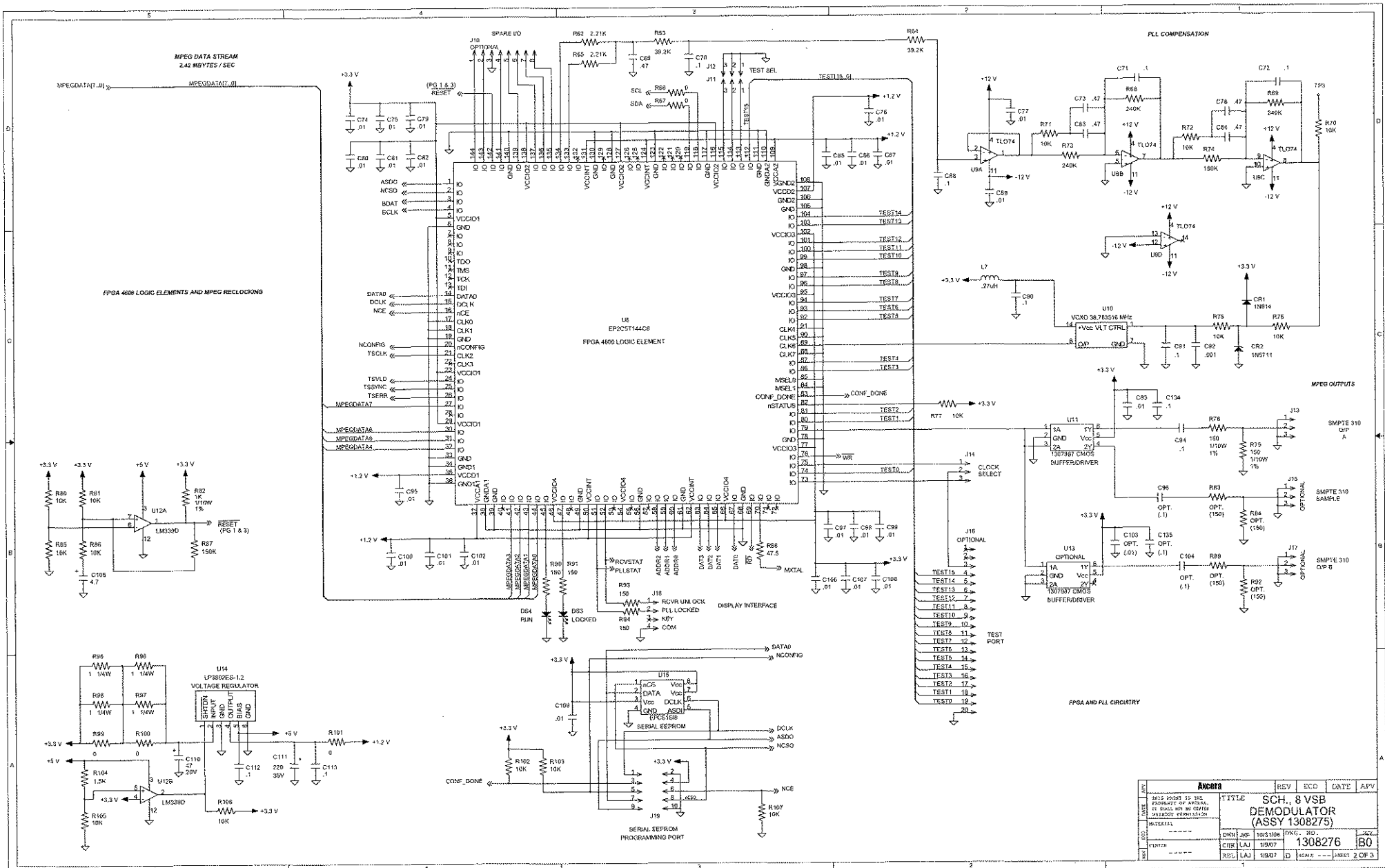




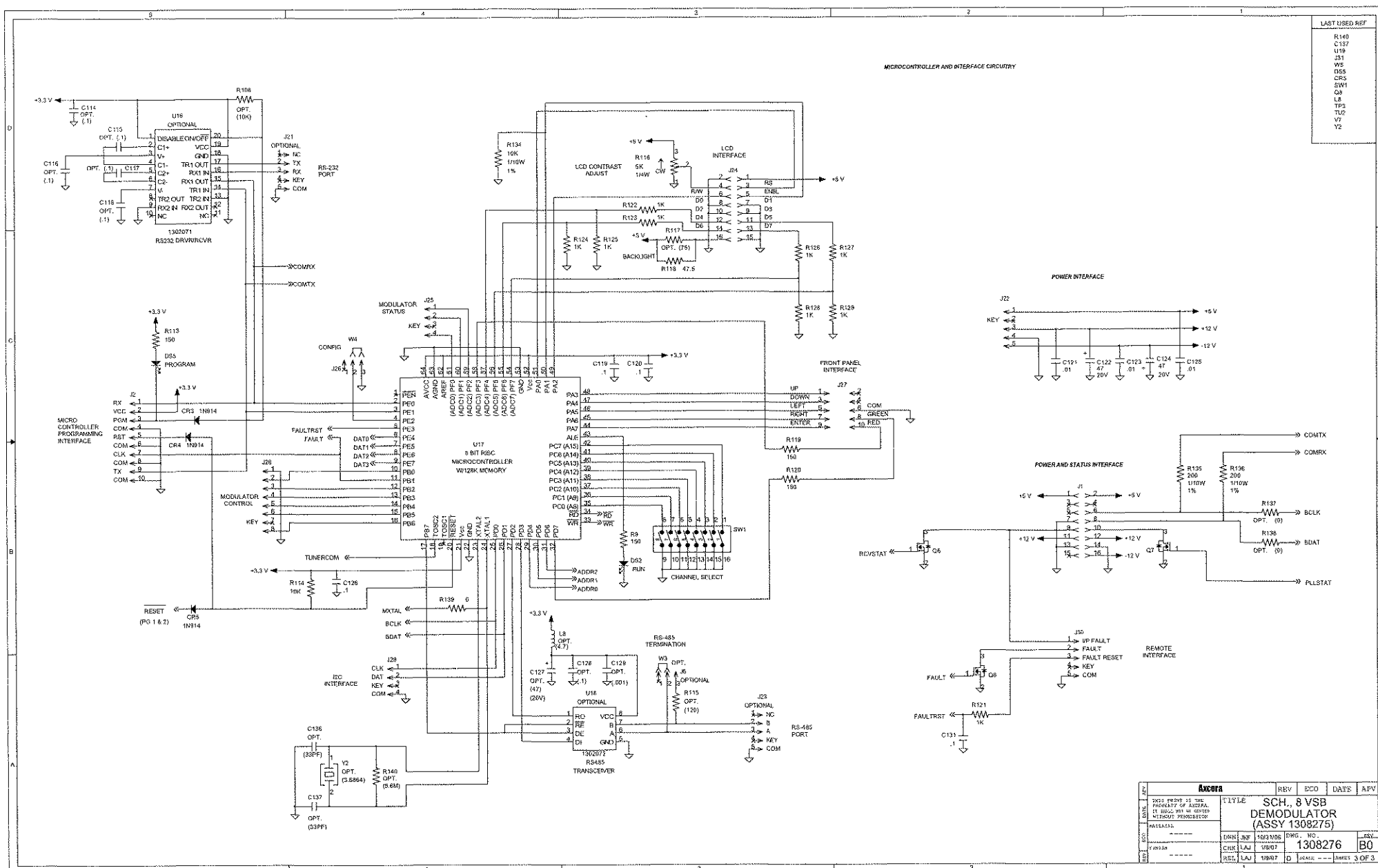
NOTE: ALL WIRE IS 22 AWG UNLESS OTHERWISE SPECIFIED.

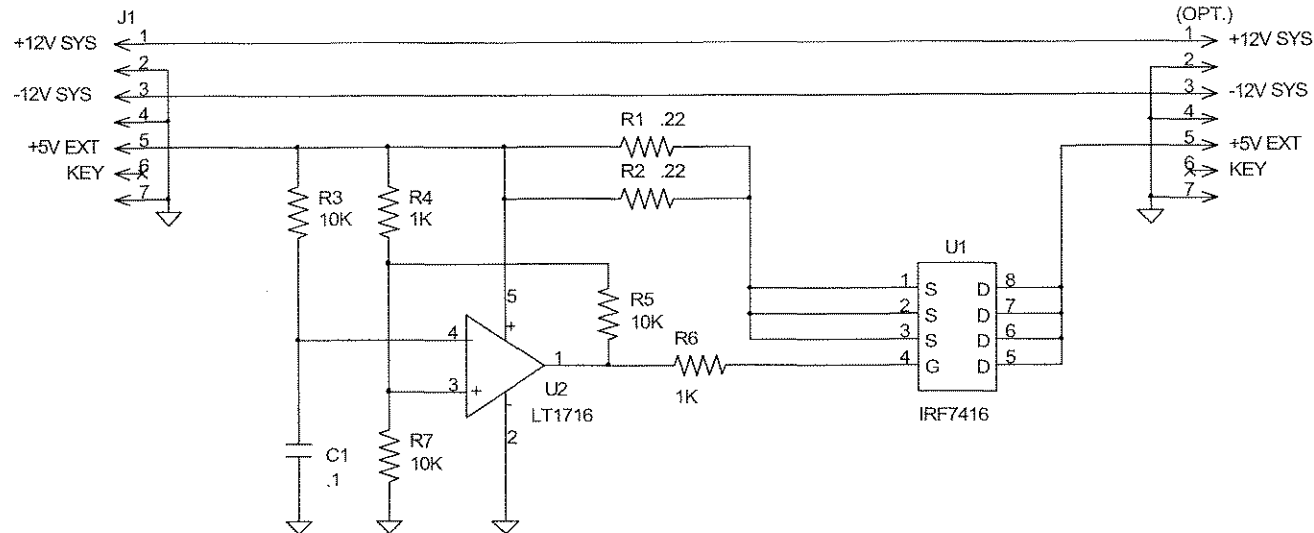
		THIS PRINT IS THE PROPERTY OF AXCCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.		TITLE		REV		ECO		DATE		APV	
		MATERIAL		FINISH		DWN		SAC		CHK		REL	
						9/7/07		1309540		A0		1 OF 1	
						LAJ/10/25/07		D		SCALE			





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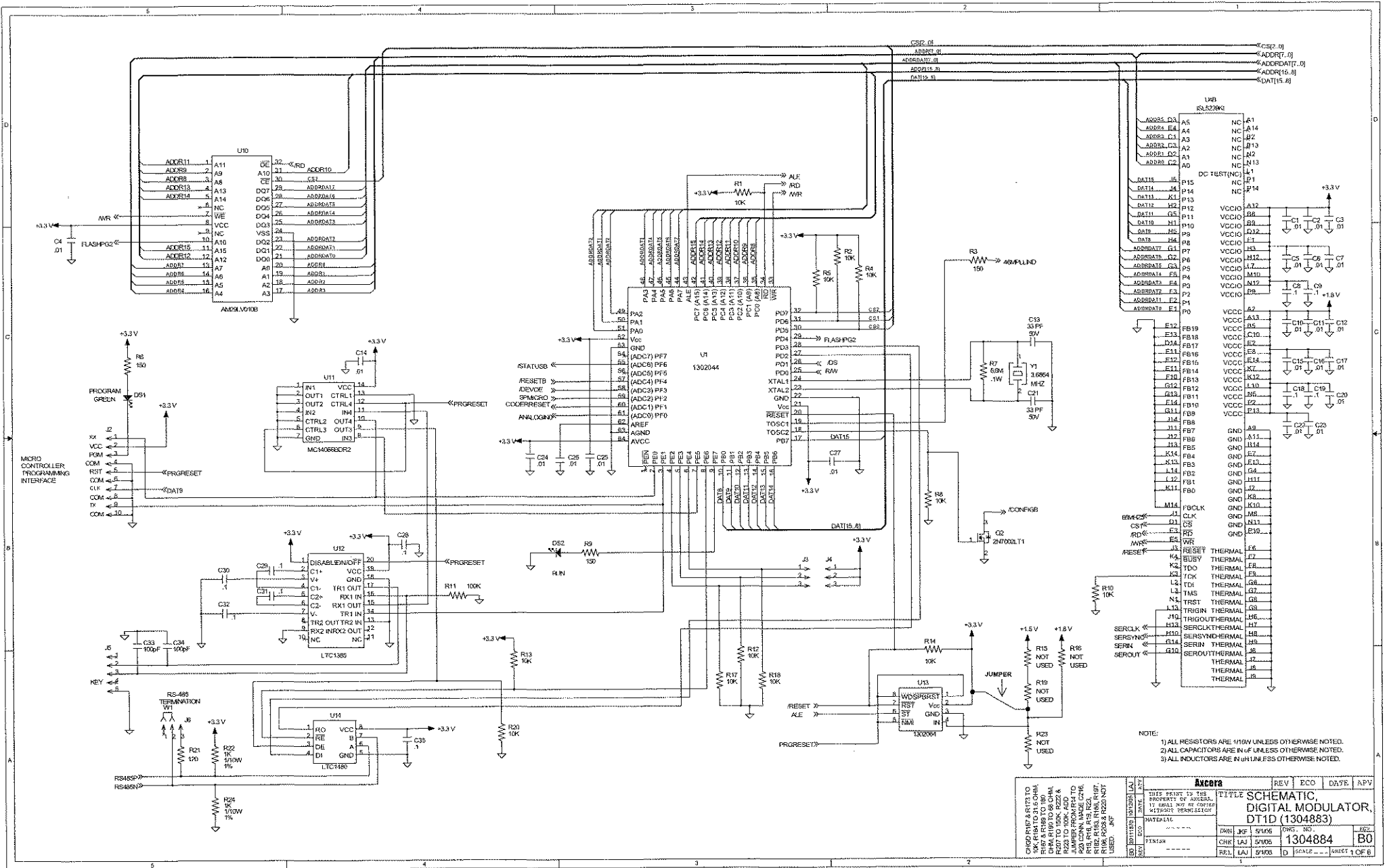


LAST USED REF
J2
R7
U2
C1

NOTE:

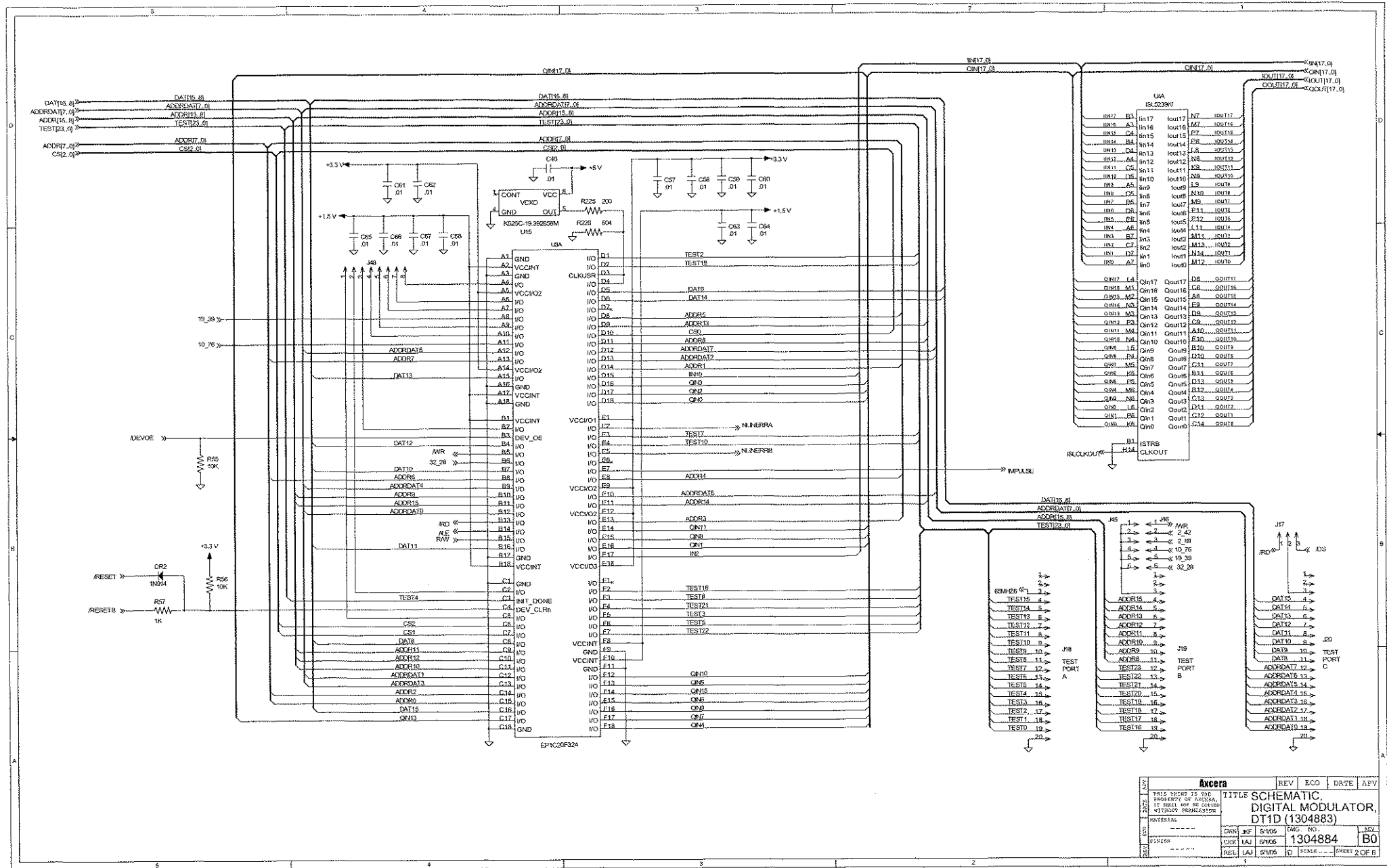
- 1) ALL RESISTORS ARE 1/8W UNLESS OTHERWISE NOTED.
- 2) ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE NOTED.
- 3) ALL INDUCTORS ARE IN μ H UNLESS OTHERWISE NOTED.

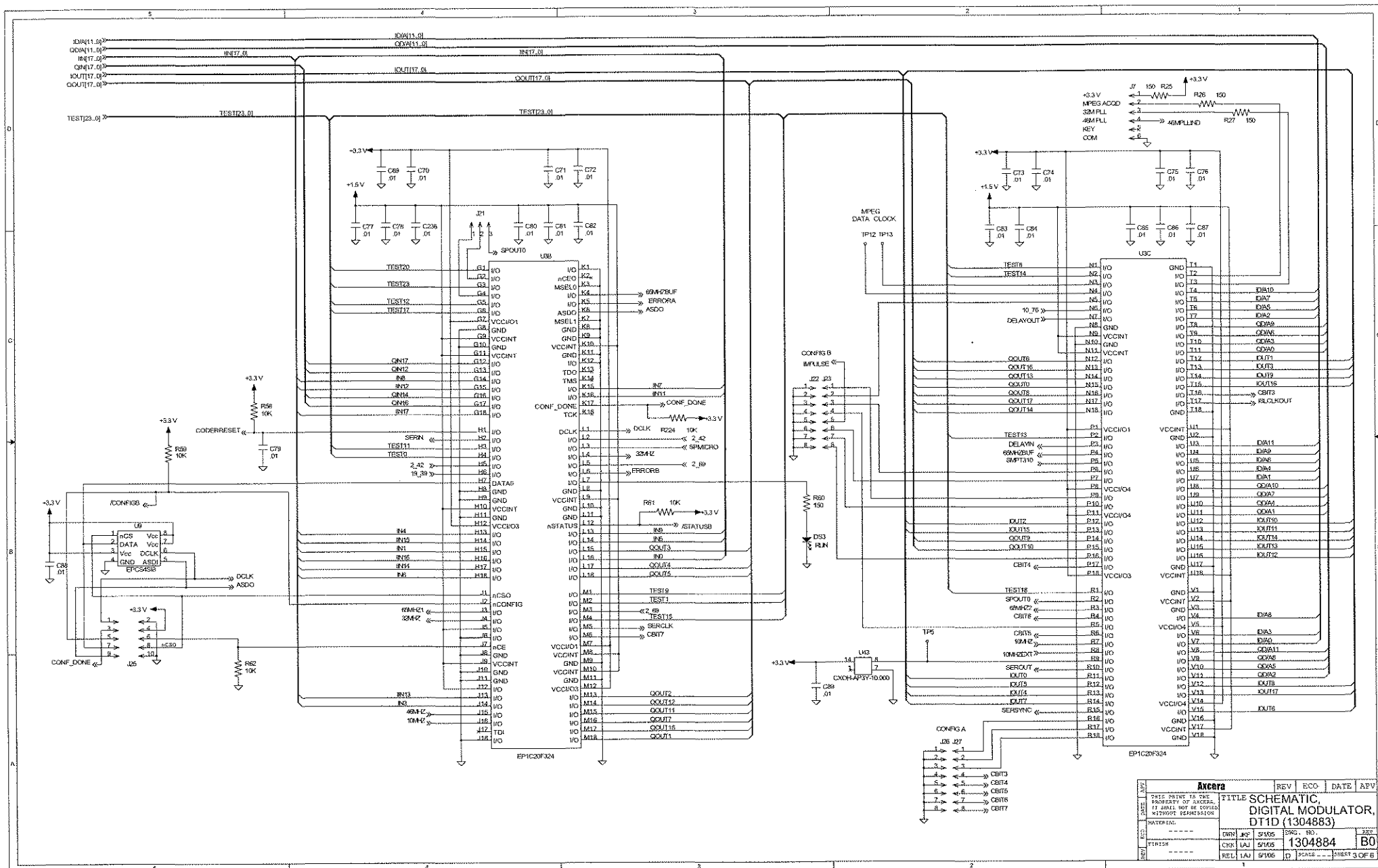
Axcera				REV	ECO	DATE	APV
THIS PRINT IS THE PROPERTY OF AXCERA, IT SHALL NOT BE COPIED WITHOUT PERMISSION				TITLE SCH., POWER			
				CONDITIONING BD., DT1D (ASSY 1309404)			
MATERIAL				DWN	JKF	7/9/07	DWG. NO.
FINISH				CHK	LAJ	7/12/07	1309405
				REL	LAJ	7/12/07	B
				SCALE ---		SHEET 1 OF 1	

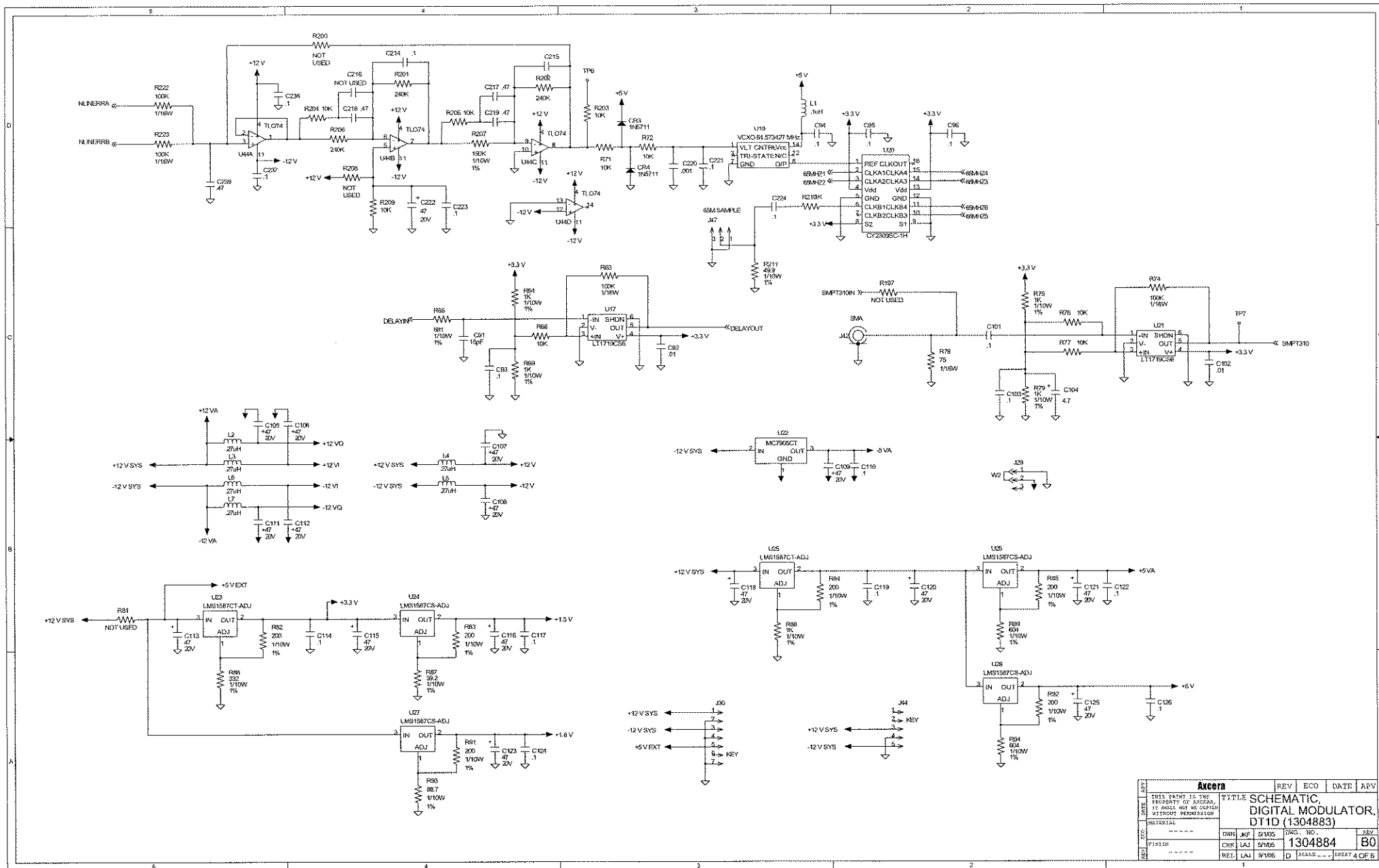


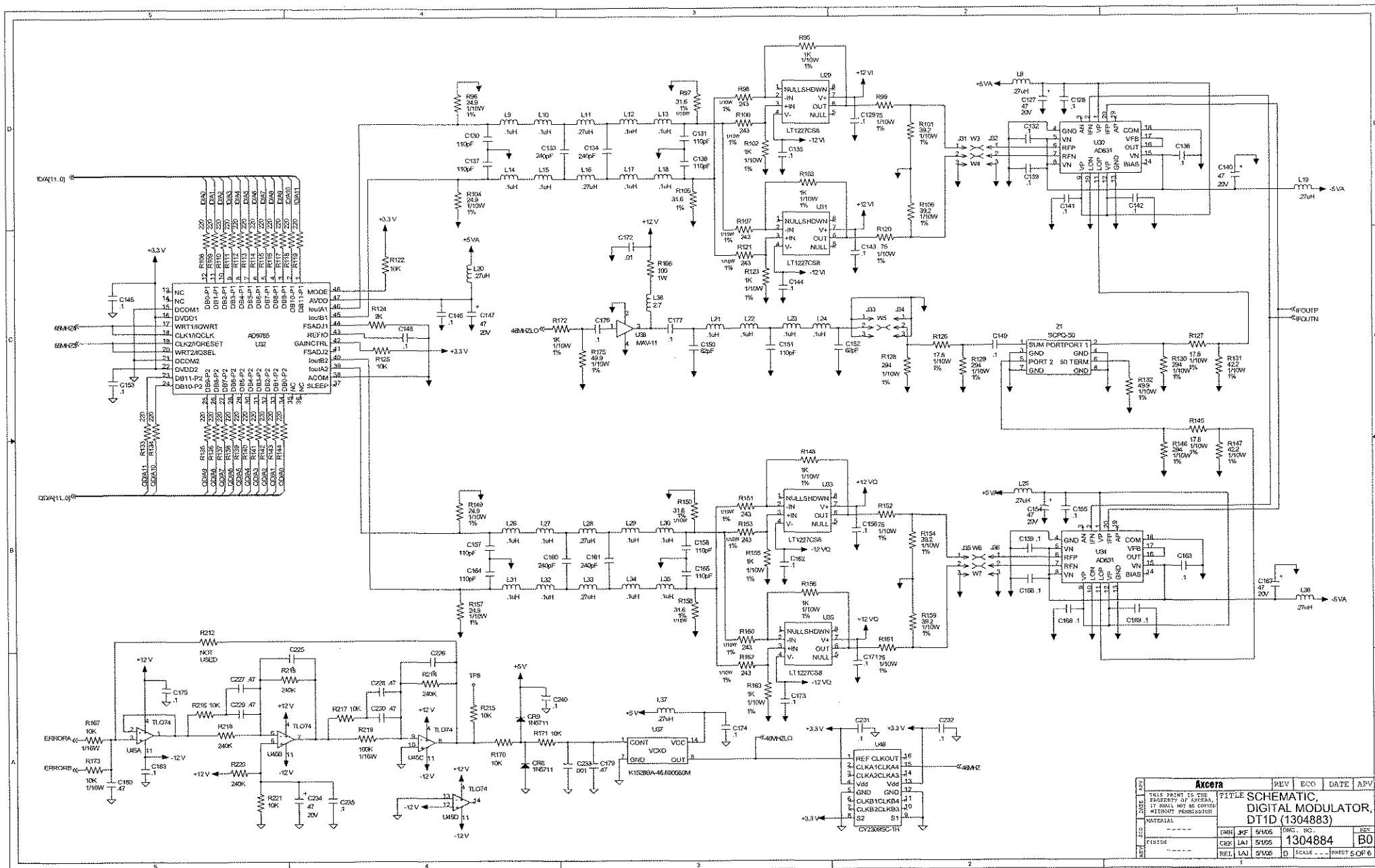
NOTE:
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2) ALL CAPACITORS ARE IN nF UNLESS OTHERWISE NOTED.
3) ALL INDUCTORS ARE IN nH UNLESS OTHERWISE NOTED.

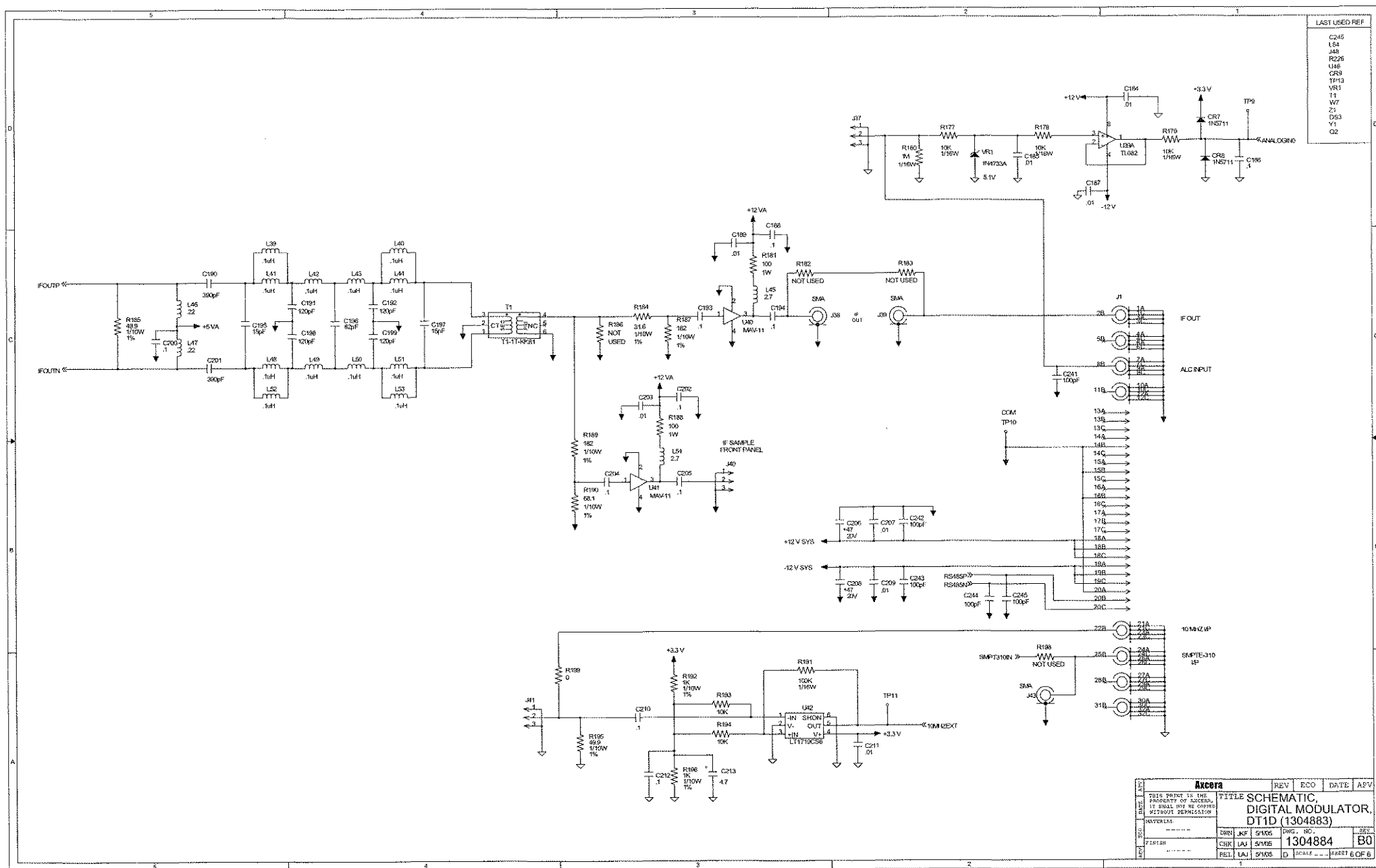
REV		ECO	DATE	APV
TITLE		DIGITAL MODULATOR		
PART NO.		DT1D (1304883)		
CHK	JF	5/106	DRG. NO.	80
CHK	LJ	5/106	1304884	
REL	LJ	5/106	D	SCALE

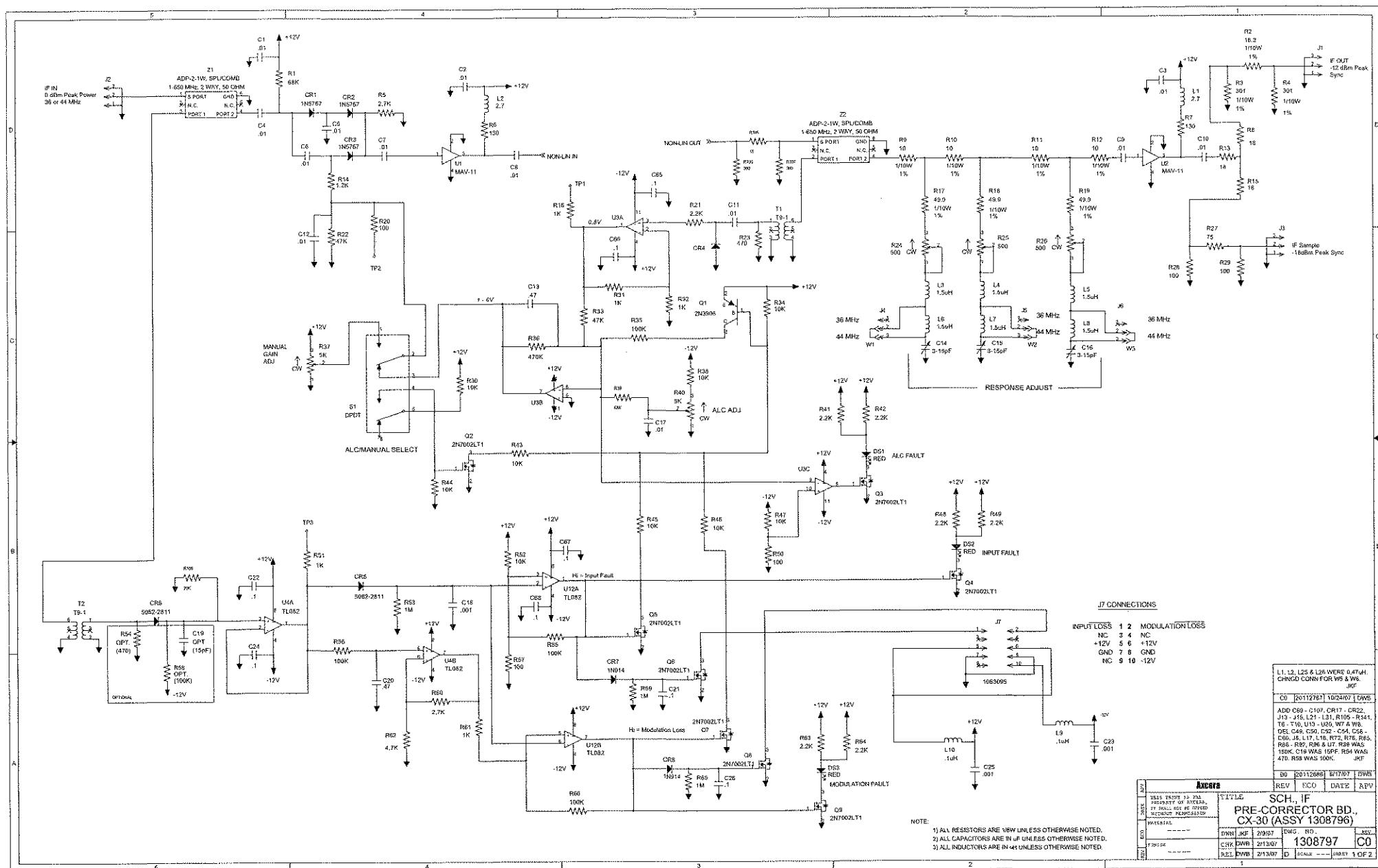


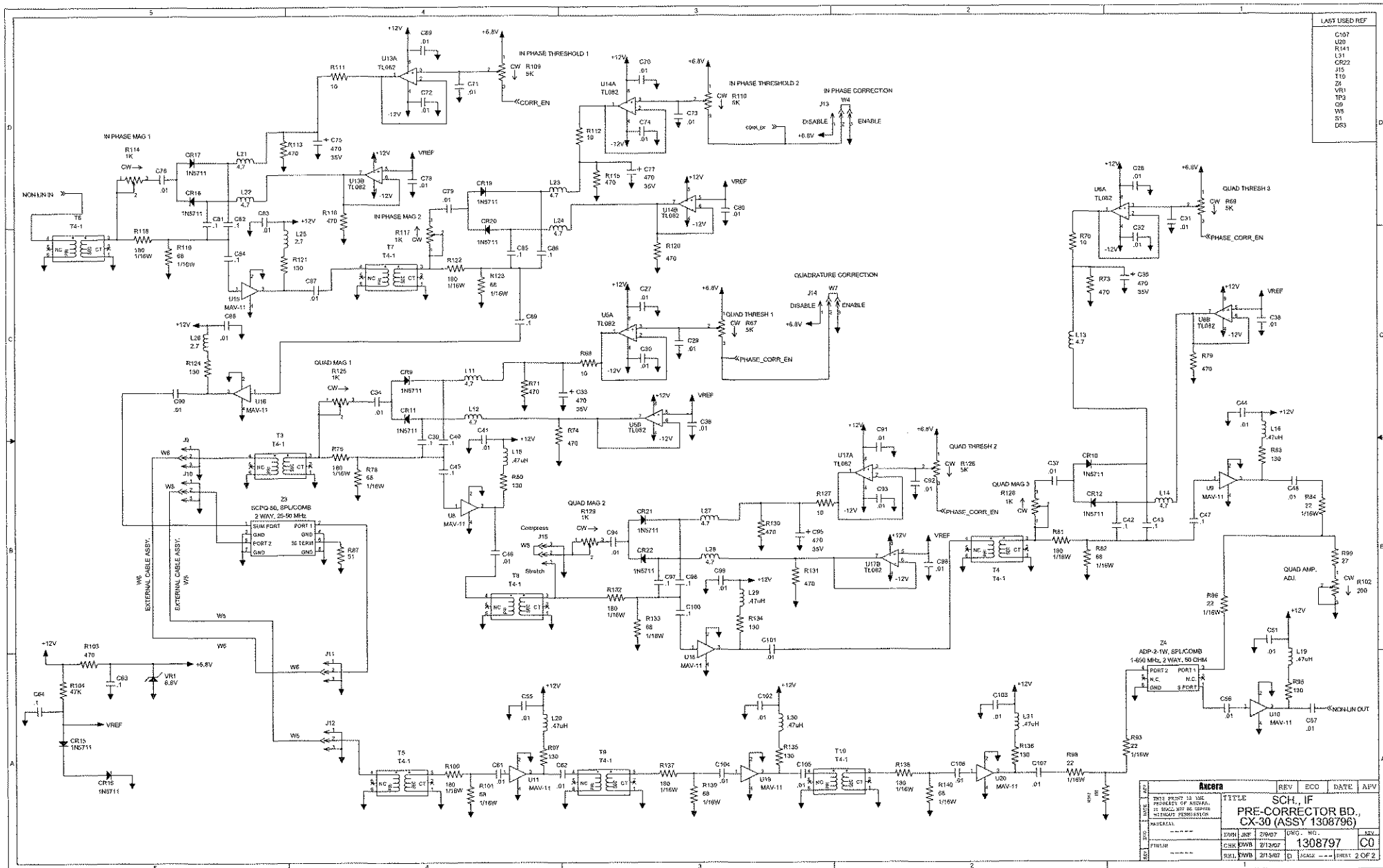


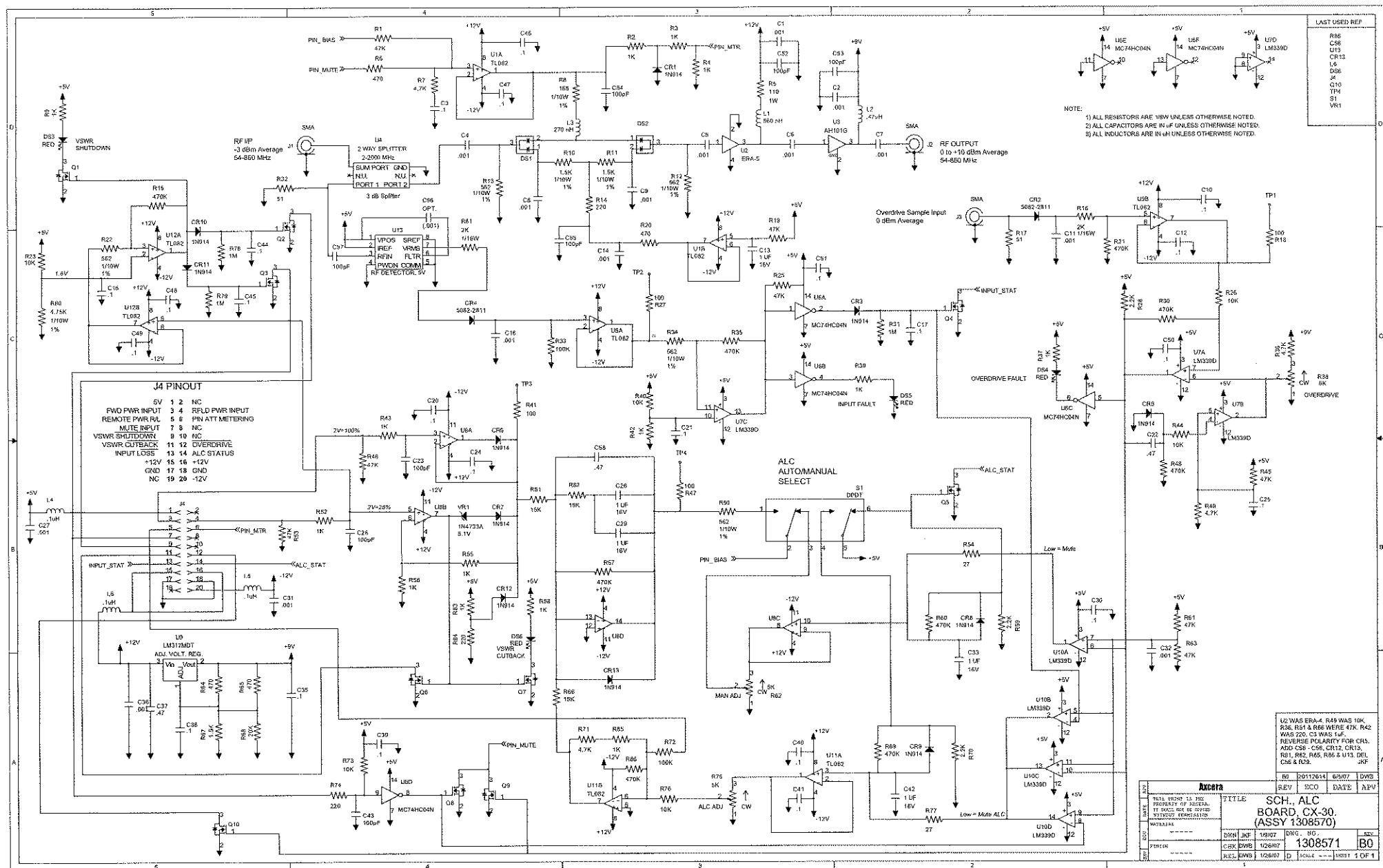




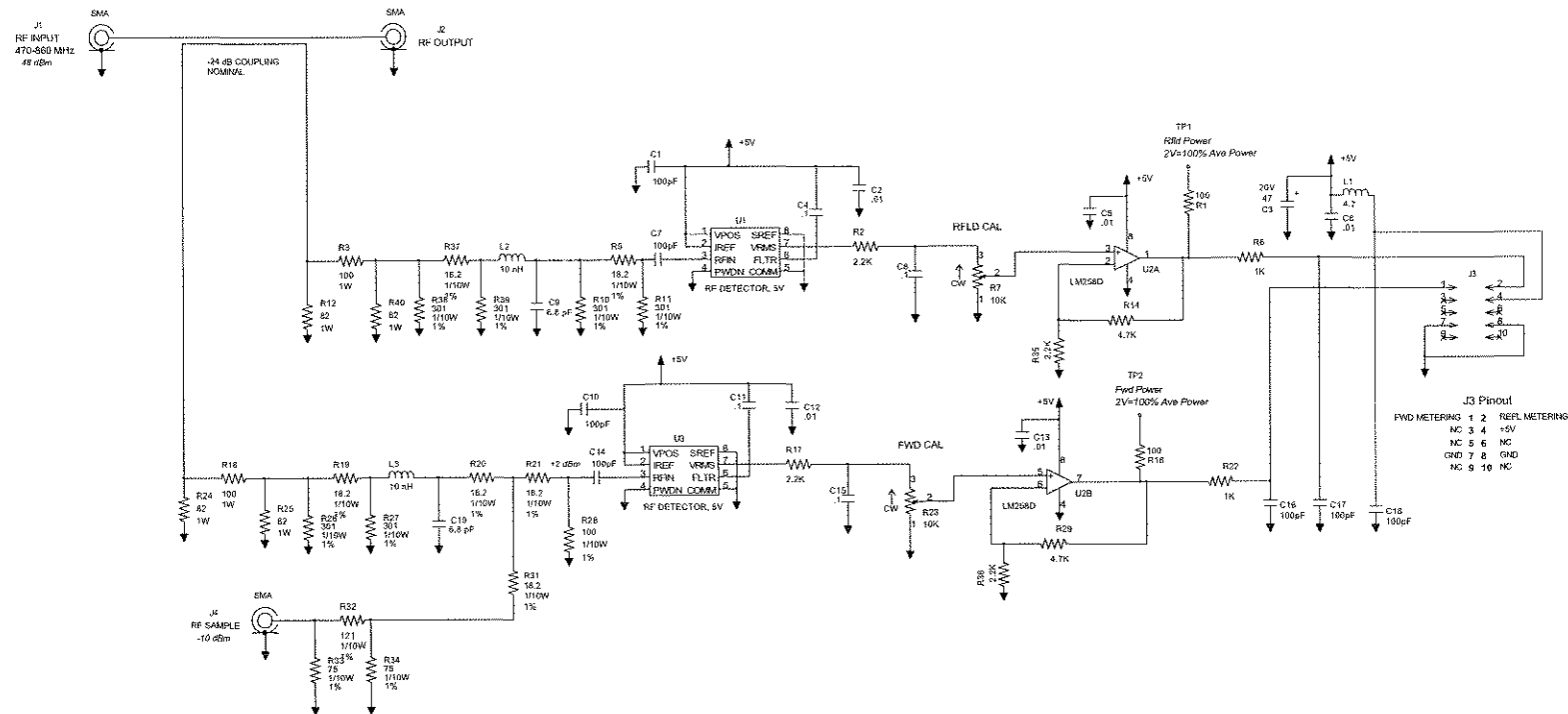






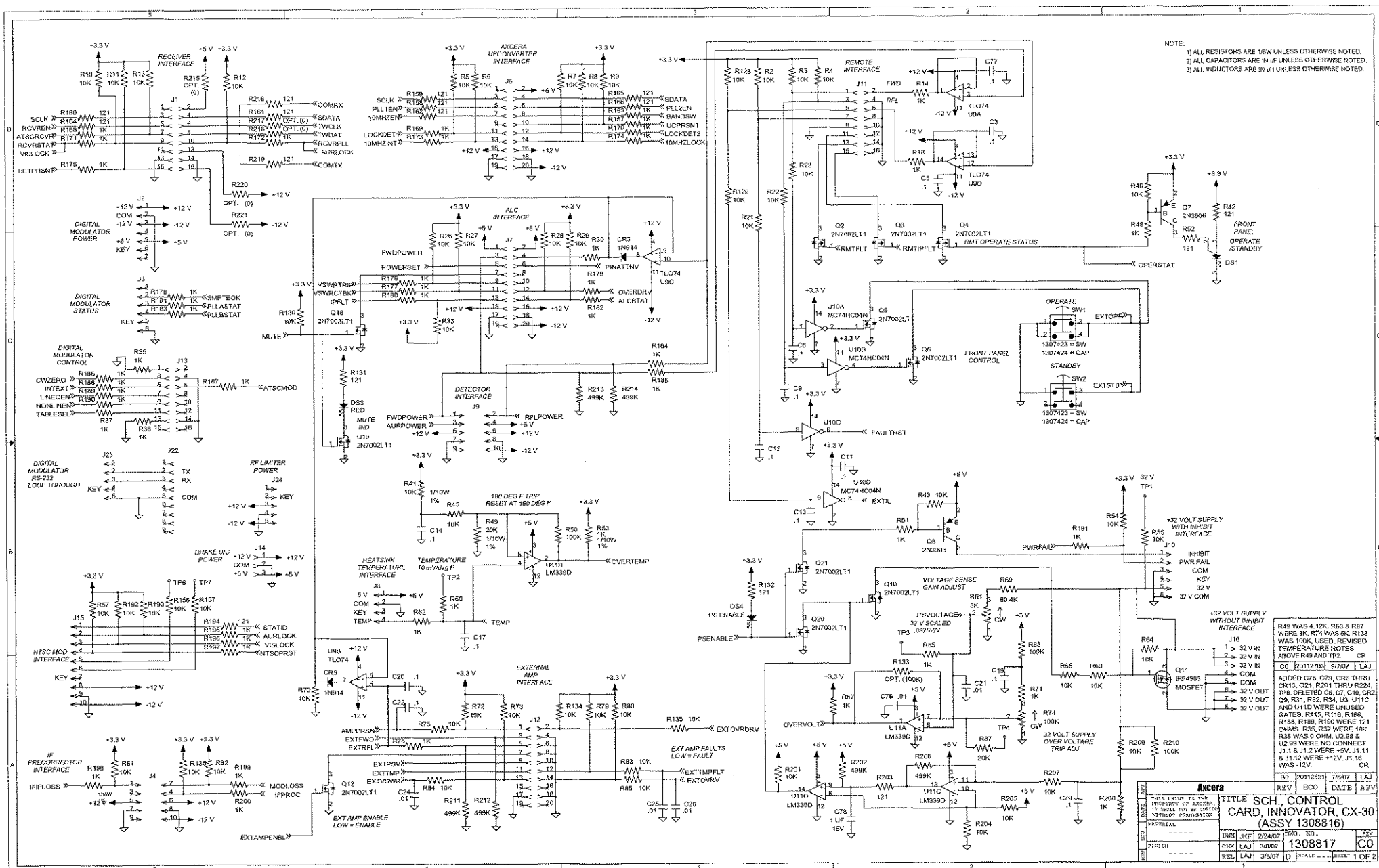


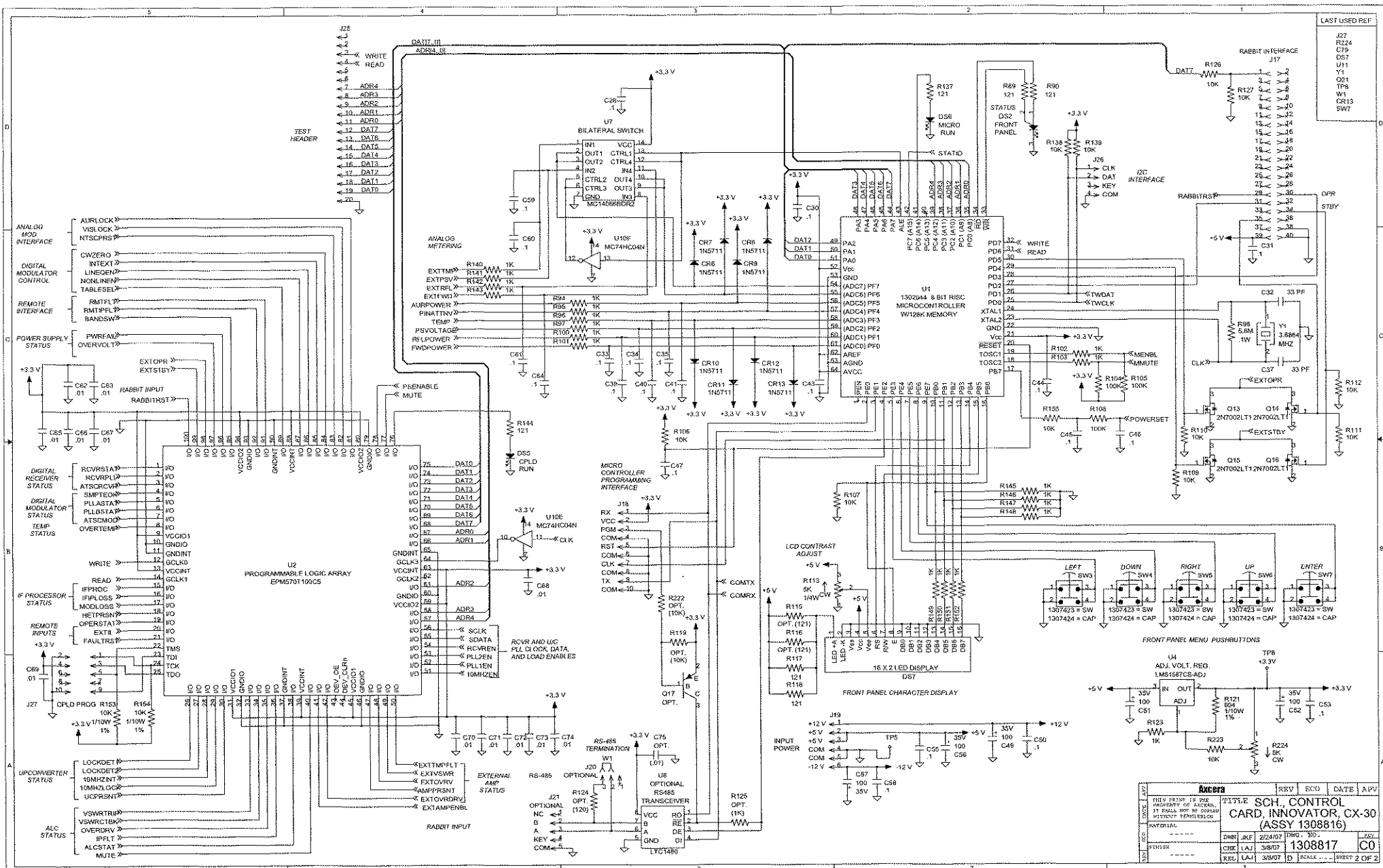
LAST USED REF	
J1	C19
TP2	R40
L3	U3



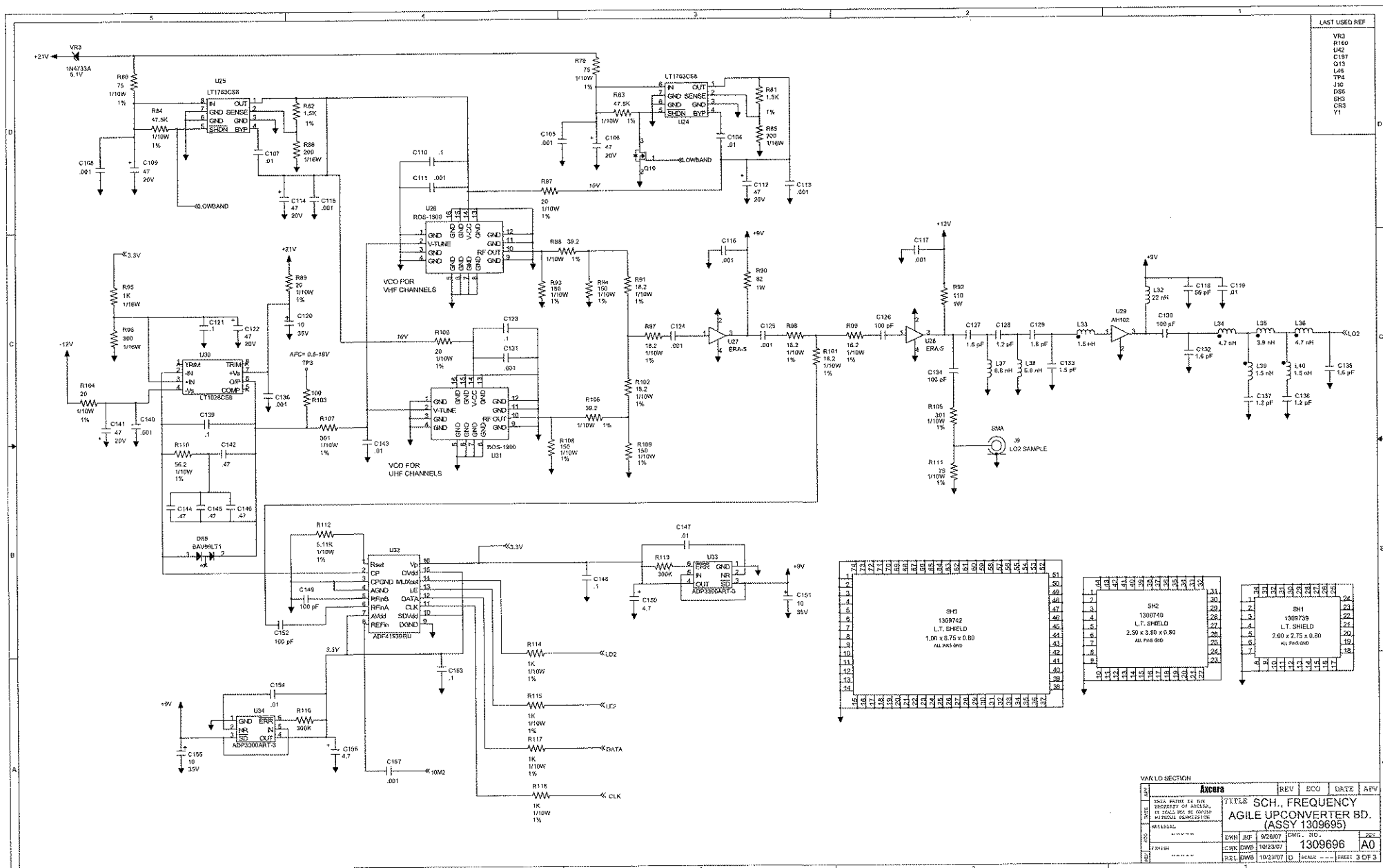
NOTE:
 1) ALL RESISTORS ARE 1% UNLESS OTHERWISE NOTED.
 2) ALL CAPACITORS ARE IN pF UNLESS OTHERWISE NOTED.
 3) ALL INDUCTORS ARE IN uH UNLESS OTHERWISE NOTED.

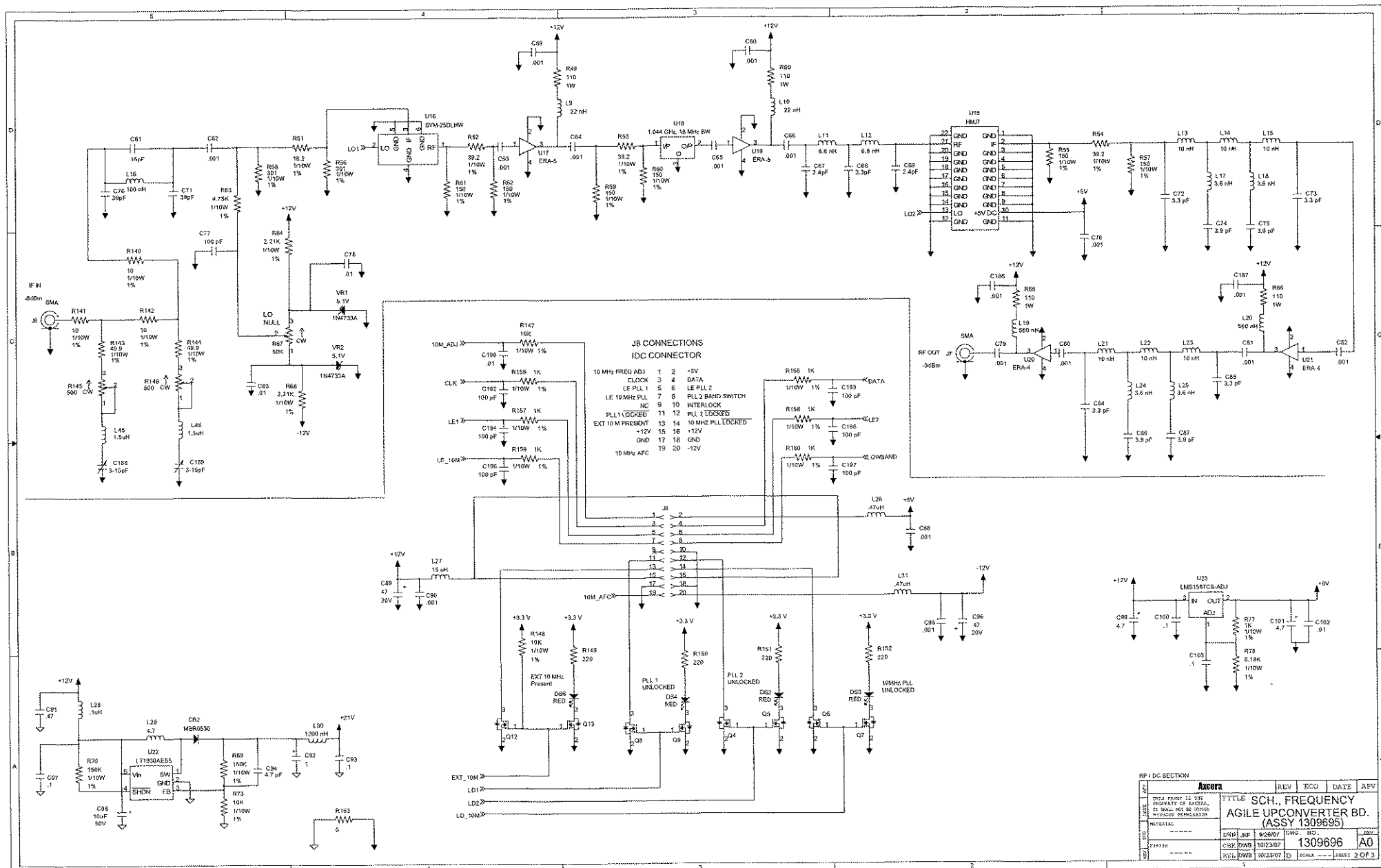
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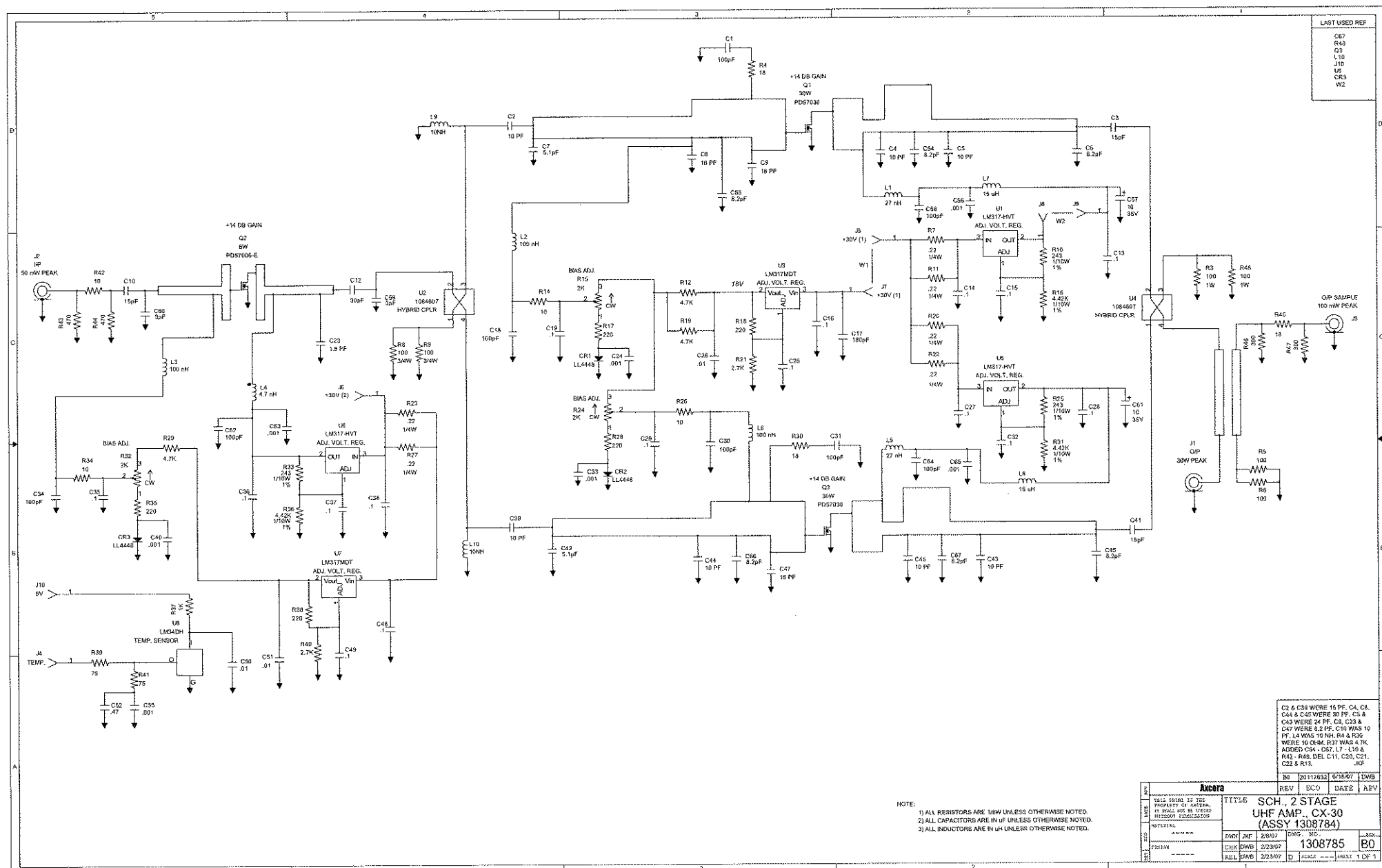




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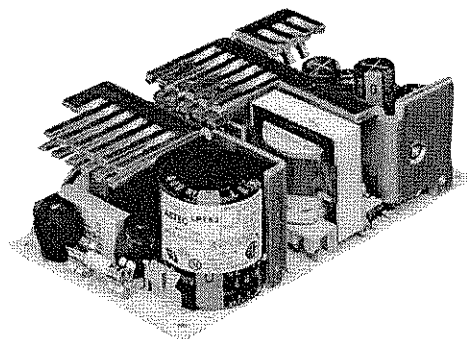




LPT60 Series

60 Watts

Total Power: 60 - 80 Watts
Input Voltage: 85 - 264 VAC
120 - 300VDC
of Outputs: Triple



Special Features

- Universal input
- 3" x 5" footprint
- Remote sense on main output
- Built-in EMI filter
- Low output ripple
- Adjustable main output
- Overvoltage protection
- Overload protection
- 110-KHz switching frequency
- LPX60 enclosure kit available

Safety

VDE 0805/EN60950 (IEC950)
11774-3336-1255
(LC #86665)
UL UL1950
E132002
CSA CSA 22.2-234 Level 3
LR53982C
NEMKO EN 60950/EMKO-TUE
P95100123
(74-sec) 203
CB Certificate and report
1518, 1519, 1520
CE Mark (LVD)

Electrical Specifications

Input	
Input range	85-264VAC 120-300VDC
Frequency	47-440Hz
Inrush current	<18A peak @ 115VAC; <36A peak @ 230VAC, cold start @ 25°C
Input current	1.5A max. (RMS) @ 115VAC
Efficiency	70% typical at full load (60% for LPT61)
EMI	FCC Class B conducted; CISPR 22 Class B conducted EN55022 Class B conducted; VDE 0878 PT3 Class B conducted
Safety ground leakage current	<0.5 mA @ 50/60 Hz, 264 VAC input
Output	
Maximum Power	60W for convection (LPT61, 35W); 80W with 30CFW forced air (LPT61, 55W)
Cross regulation	±2% on output 1; ±5% on outputs 2, 3
Adjustment range	-5, +10% minimum
Hold-up time	20ms @ 40W load, 115 VAC nominal line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110% to 145% above peak rating
Overvoltage protection	5.7 to 6.7 VDC on the main output LPT41: 3.6 to 4.6VDC
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.



Environmental Specifications

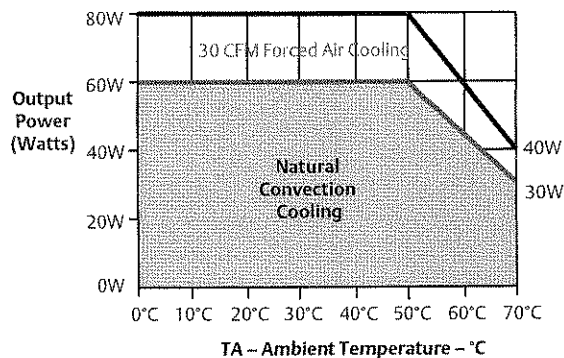
Operating temperature:	0° to 50°C ambient derate each output at 2.5% per degree from 50° to 70°C, -20°C startup
Electromagnetic susceptibility:	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity:	Operating; non-condensing 5% to 95%
Vibration:	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.75G peak 5 Hz to 500 Hz, operational
Storage temperature:	-40° to 85°C
Temperature coefficient:	±.04% per °C
MTBF demonstrated:	>550,000 hours at full load and 25°C ambient conditions

Ordering Information

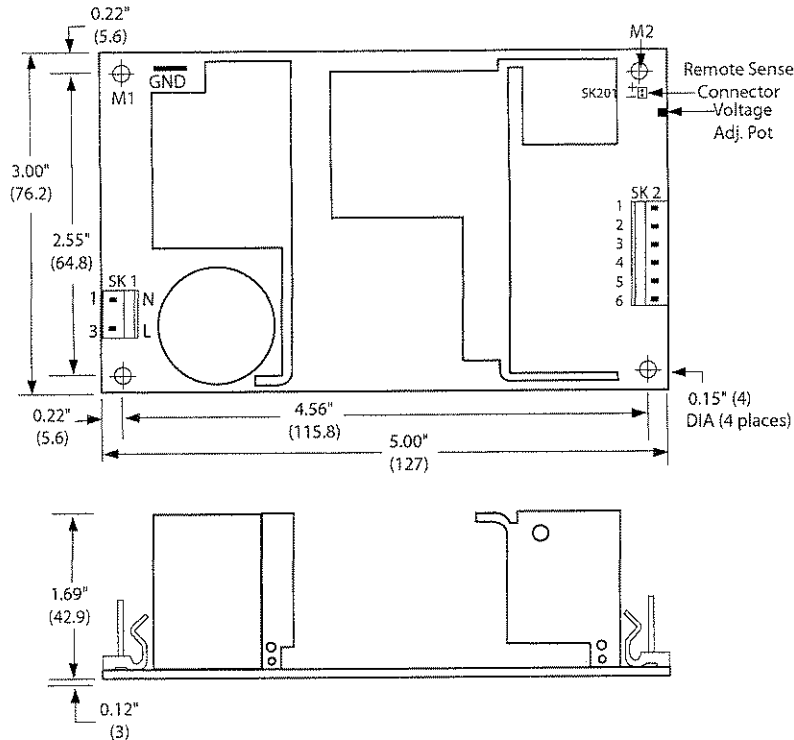
Model Number	Output Voltage	Minimum Load	Maximum Load with Convective cooling	Maximum Load with 30CFM Forced Air	Peak Load ¹	Regulation ²	Ripple P/P (PARD) ³
LPT61	+3.3V	0.7A	5A	8.5A	9.5A	±2%	50mV
	+5V	0A	2.5A	3.0A	3.3A	±2%	50mV
	+12V	0A	0.5A	1.0A	1A	±5%	120mV
LPT62	+5V	0.7A	7A	8A	10A	±2%	50mV
	+12V	0.3A	3A	3.5A	6A	±5%	120mV
	-12V	0A	0.7A	1A	1.5A	±5%	120mV
LPT63	+5V	0.7A	7A	8A	10A	±2%	50mV
	+15V	0.3A	2.8A	3.3A	4A	±5%	150mV
	-15V	0A	0.7A	1A	1.5A	±5%	150mV
LPT64	+5V	0.7A	7A	8A	10A	±2%	50mV
	+12V	0.3A	3A	3.5A	6A	±5%	120mV
	-5V	0A	0.7A	1A	1.5A	±5%	50mV
LPT65	+5V	0.7A	7A	8A	10A	±2%	50mV
	+24V	0.1A	1.5A	2.0A	3A	±7%	240mV
	+12V	0A	0.7A	1A	1.5A	±5%	120mV

1. Peak current lasting <30 seconds with a maximum 10% duty cycle.
2. At 25°C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 MHz bandwidth and 10 μ F in parallel with a 0.1 μ F capacitor at rated line voltage and load ranges.
4. Minimum Loads are required.

Power Derating Curve



Mechanical Drawing



Pin Assignments

Connector:	LPT61	LPT62	LPT63	LPT64	LPT65
SK1-1	Neutral	Neutral	Neutral	Neutral	Neutral
SK1-3	Line	Line	Line	Line	Line
SK2-1	5V	+12V	+15V	+12V	+24V
SK2-2	3.3V	+5V	+5V	+5V	+5V
SK2-3	3.3V	+5V	+5V	+5V	+5V
SK2-4	Common	Common	Common	Common	Common
SK2-5	Common	Common	Common	Common	Common
SK2-6	+12V	+12V	-15V	-5V	+12V
SK201-1	+Sense	+Sense	+Sense	+Sense	+Sense
SK201-2	-Sense	-Sense	-Sense	-Sense	-Sense

Mating Connectors

AC Input: Molex 09-50-8031 (USA)
09-91-0300 (UK)
PINS: 08-58-0111

DC Outputs: Molex 09-50-8061 (USA)
09-91-0600 (UK)
PINS: 08-52-0113

Remote Sense: Molex 22-01-2025
PINS: 08-52-0113

Astec Connector Kit #70-841-006, includes all of the above

- Specifications subject to change without notice.
- All dimensions in inches (mm), tolerance is ± 0.02 (± 0.5 mm)
- Mounting holes M1 and M2 should be grounded for EMI purposes.
- Mounting hole M1 is safety ground connection.
- Specifications are for convection rating at factory settings at 115 VAC input, 25°C unless otherwise stated.
- Warranty: 2 year
- Weight: 0.75lbs/0.34kg

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For global contact, visit:

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technicalsupport@astec.com

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- Embedded Power
- Inbound Power
- Integrated Cabinet Solutions
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- Precision Cooling
- Site Monitoring and Services

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SWS600 SPECIFICATIONS

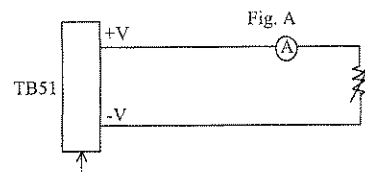
CA741-01-01C

ITEMS			MODEL	SWS600-3	SWS600-5	SWS600-12	SWS600-15	SWS600-24	SWS600-36	SWS600-48
1	Nominal Output Voltage		V	3.3	5	12	15	24	36	48
2	Maximum Output Current		A	100	100	50	40	25	16.7	12.5
3	Peak Output Current	(*11)	A	120	120	---	---	---	---	---
4	Maximum Output Power		W	330	500	600	600	600	601.2	600
5	Peak Output Power	(*11)	W	396	600	---	---	---	---	---
6	Efficiency (Typ)	(115/230VAC) (*1)	%	69 / 71	74/77	78 / 81	80 / 83	81/84	81 / 85	82/85
7	Input Voltage Range	(*2,10)	—	85 ~ 265VAC (47-63Hz) or 120 ~ 370VDC						
8	Input Current (Typ)	(115/230VAC) (*1)	A	4.3 / 2.2	6.6 / 3.3	7.2 / 3.6				
9	Inrush Current (Typ)	(*3)	—	20A at 115VAC, 40A at 230VAC, Ta=25°C						
10	PFHC		—	Built to meet EN61000-3-2						
11	Power Factor (Typ)	(115/230VAC) (*1)	—	0.99/0.95						
12	Output Voltage Range		V	2.97~3.96	4.5~6.0	9.6~13.2	13.2~18.6	20~28.8	28.8~40	40~57.6
13	Ripple and Noise	(115/230VAC) (*1,4)	mV	100	100	120	120	150	200	240
14	Line Regulation	(*4,5)	mV	20	20	48	48	48	72	96
15	Load Regulation	(*4,6)	mV	40	40	96	120	120	180	240
16	Temperature Coefficient		—	Less than 0.02%/°C						
17	Over Current Protection	(*7)	A	126~	126~	52.5~	42~	26.2~	17.6~	13.1~
18	Over Voltage Protection	(*8)	V	4.1~5.3	6.25~7.5	13.8~16.8	19.3~24.2	30.0~34.8	41.4~50.4	60.0~69.6
19	Over Temperature Protection	(*8)	—	Yes						
20	Hold-Up Time (Typ)	(115/230VAC) (*1)	—	20ms						
21	Leakage current	(*9)	—	1.5mA Max, 0.5mA(Typ) at 115VAC / 1mA(Typ) at 230VAC						
22	Remote Sensing		—	Possible						
23	Remote ON/OFF control		—	Possible						
24	Monitoring Signal		—	PF (Open Collector Output)						
25	Parallel Operation		—	Possible						
26	Series Operation		—	Possible						
27	Operating Temperature	(*10)	—	- 10 ~ + 65 °C						
28	Operating Humidity		—	30 ~ 90 %RH (No dewdrop)						
29	Storage Temperature		—	- 30 ~ +85°C						
30	Storage Humidity		—	10 ~ 95%RH (No dewdrop)						
31	Cooling		—	Forced air by blower fan						
32	Withstand Voltage		—	Input - Output : 3.0kVAC (20mA), Input - FG : 2.0kVAC (20mA) Output - FG : 500VAC (100mA), Output - CNT : 100VAC (100mA) for 1min.						
33	Isolation Resistance		—	More than 100MΩ at Ta=25°C and 70%RH, Output - FG : 500VDC						
34	Vibration		—	At no operating, 10 - 55Hz (sweep for 1min) 19.6m/s ² Constant, X, Y, Z 1hour each						
35	Safety		—	Approved by UL60950-1, CSA60950-1, EN60950-1, EN50178						
36	EMI	(*1)	—	Built to meet FCC-Class B, EN55011/EN55022-B						
37	Immunity	(*1)	—	Built to meet EN61000-4-2,-3,-4,-5,-6,-8,-11						
38	Weight (Typ)		g	2000						
39	Dimension		mm	92 x 120 x 190 (Refer to Outline Drawing)						

* Read instruction manual carefully , before using the power supply unit.

= NOTES=

- * 1 : At maximum output power, nominal input voltage, Ta = 25°C.
- * 2 : For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC, 50 / 60Hz on name plate.
- * 3 : First inrush current, not applicable for the in-rush current to Noise Filter for less than 0.2ms.
- * 4 : Please refer to Fig A for measurement of line & load regulation, ripple and noise.
Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uF and 47uF capacitor.
- * 5 : 85 - 265VAC, constant load.
- * 6 : No load - Full load(Maximum power), constant input voltage.
- * 7 : Constant current limit with automatic recovery.
Avoid to operate at overload or dead short for more than 30seconds.
- * 8 : OVP, OTP circuit will shutdown output, manual reset (Re power on).
- * 9 : Measured by each measuring method of UL, CSA, EN.
- * 10: Refer to Output Derating Curve (next page) for details of output derating versus input voltage, ambient temperature and mounting method .
- * 11: Operating period at peak output current is less than 5sec.(Duty<=0.35).
(Average output power and current is less than Maximum output power and current)

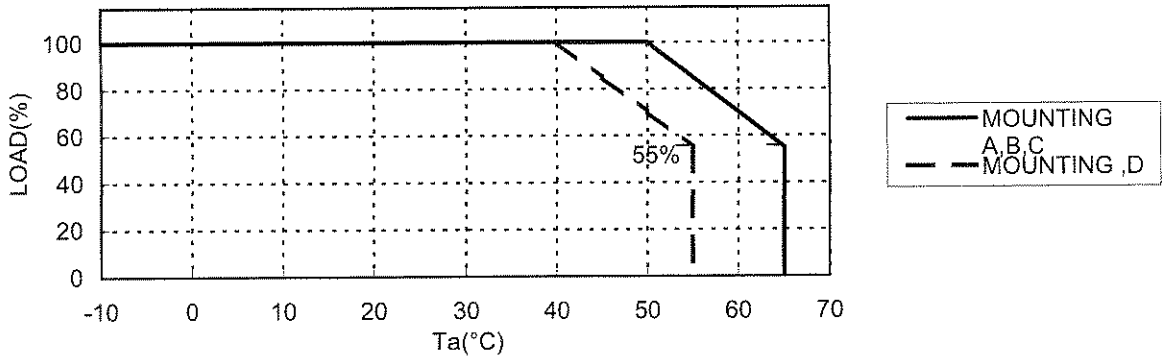


Measurement point for Vo Line/Load Regulation, and ripple and noise.

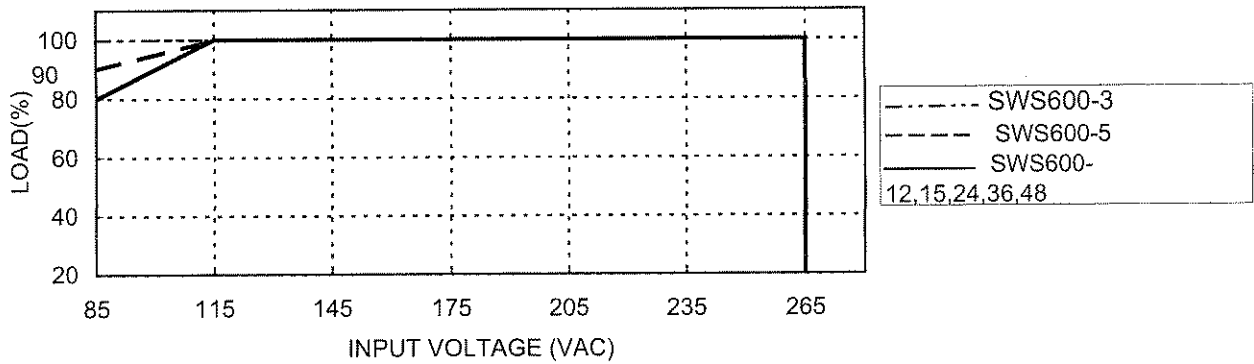
SWS600 OUTPUT DERATING

CA741-01-02A

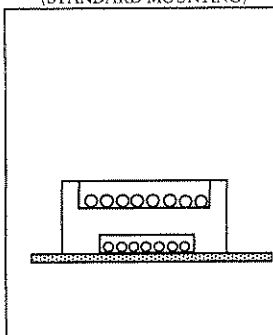
SWS600 OUTPUT DERATING VS AMBIENT TEMPERATURE



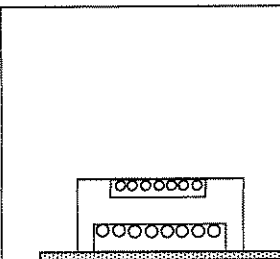
SWS600 OUTPUT DERATING VS INPUT VOLTAGE



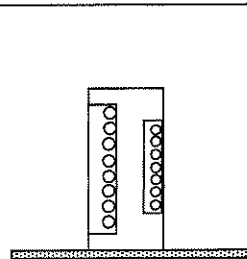
MOUNTING A
(STANDARD MOUNTING)



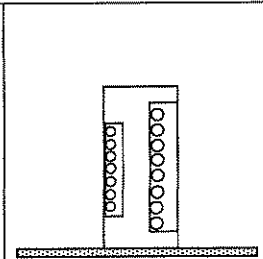
MOUNTING B

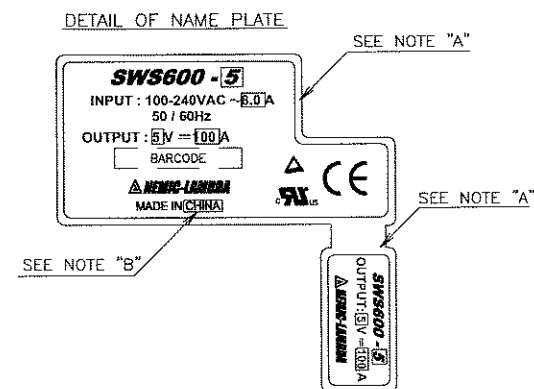
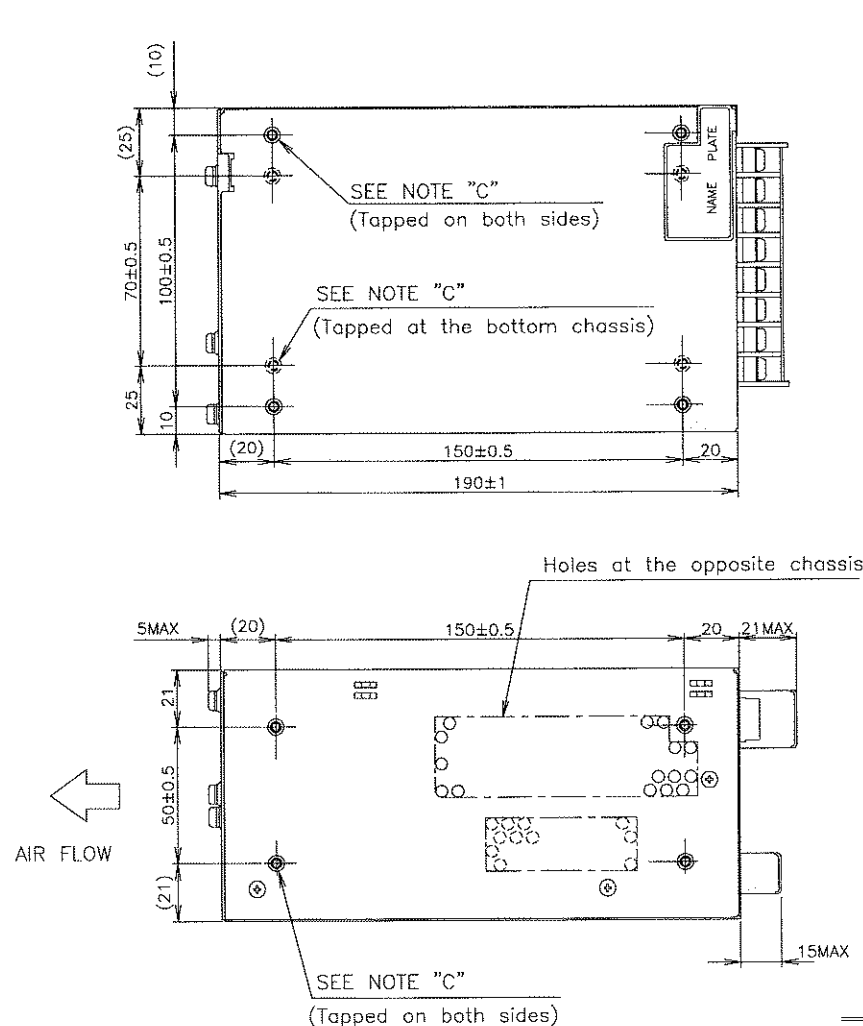


MOUNTING C



MOUNTING D





A: Model name, nominal output voltage and maximum output current are shown here in accordance with the specifications.

B: Country of manufacture will be shown here.

C: M4 tapped holes (20) for customer chassis mounting.

{ Screws must not protrude into power supply by more than 6mm }

MODEL	SWS600
DENSEL-LAMBDA	