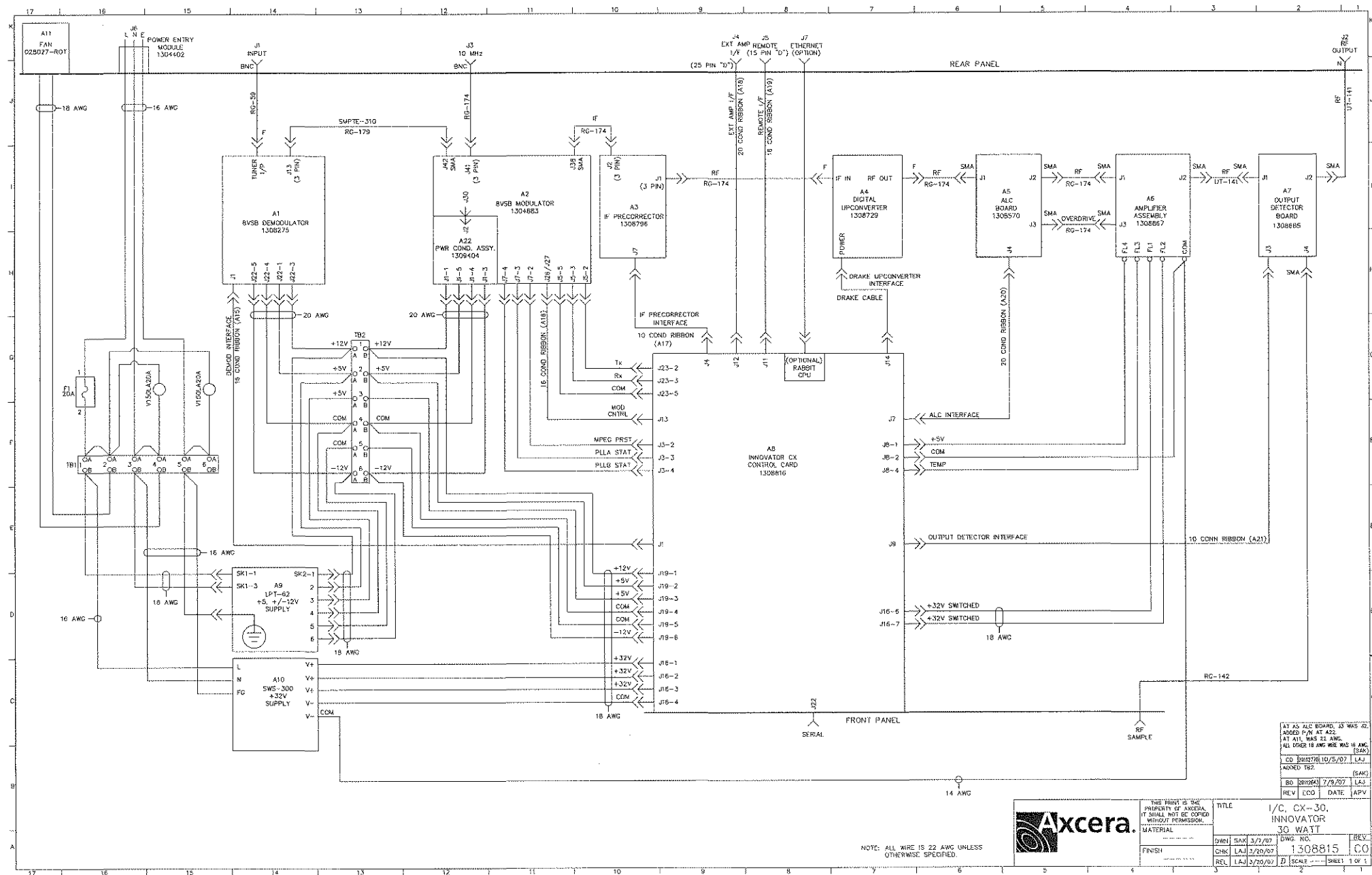
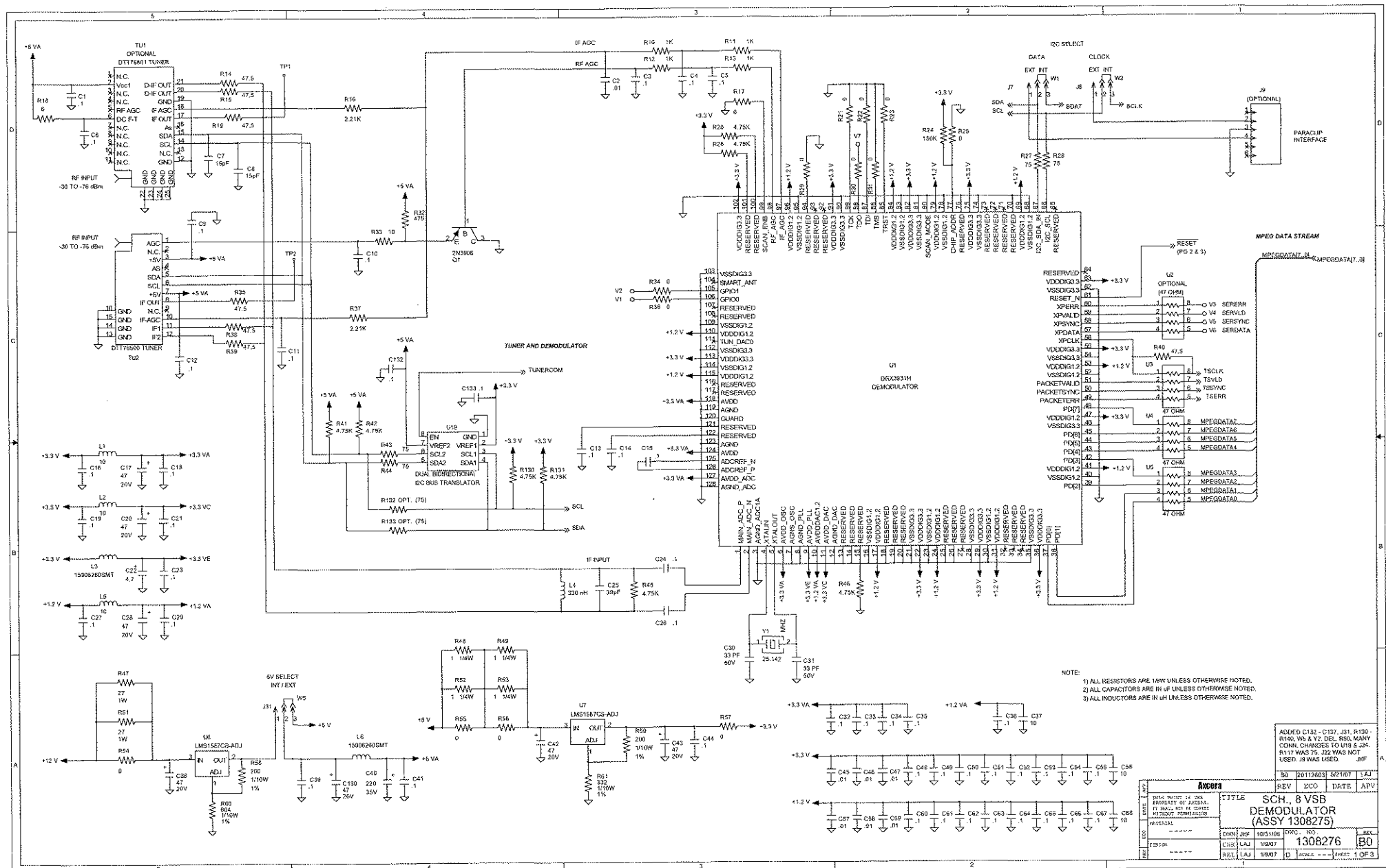


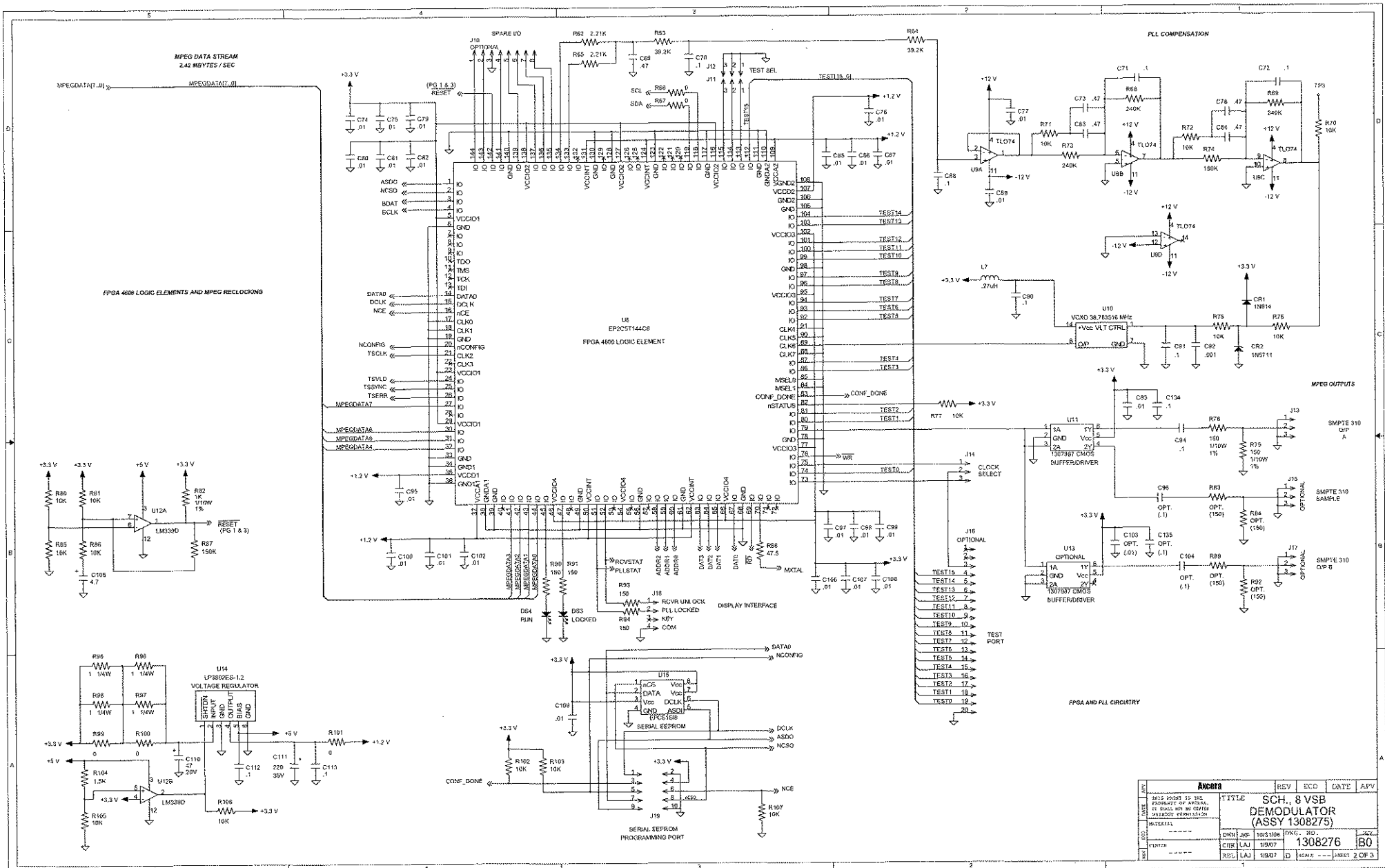


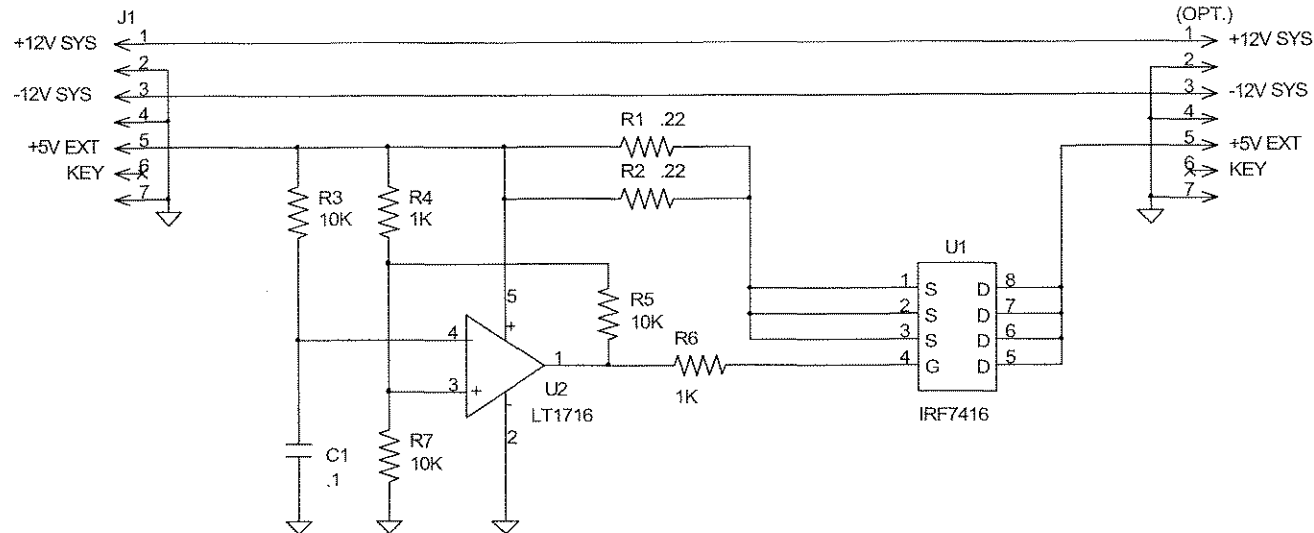
NOTE: ALL WIRE IS 22 AWG UNLESS OTHERWISE SPECIFIED.



THE PARTY IS THE PROPERTY OF ANDREA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.		TITLE		I/C, CX-30, INNOVATOR 30 WATT	
MATERIAL		DWG. NO.		REV.	
FINISH		DWG.	DATE	NO.	
		CHK	1/1	3/20/07	1308815
		REL	1/1	3/20/07	CO
		D		SCALE	SHEET 1 OF 1







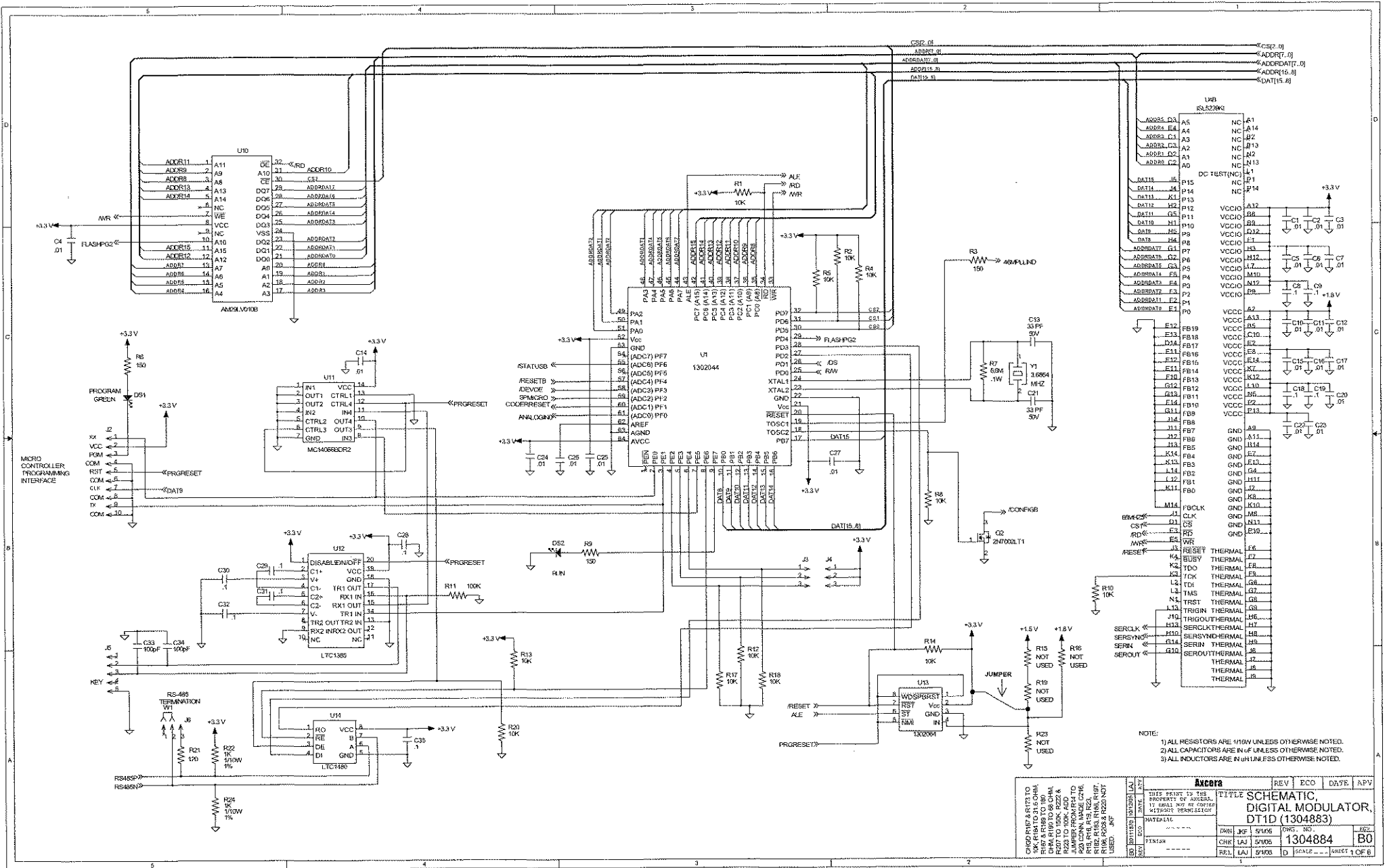
NOTE:

- 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.

LAST USED REF

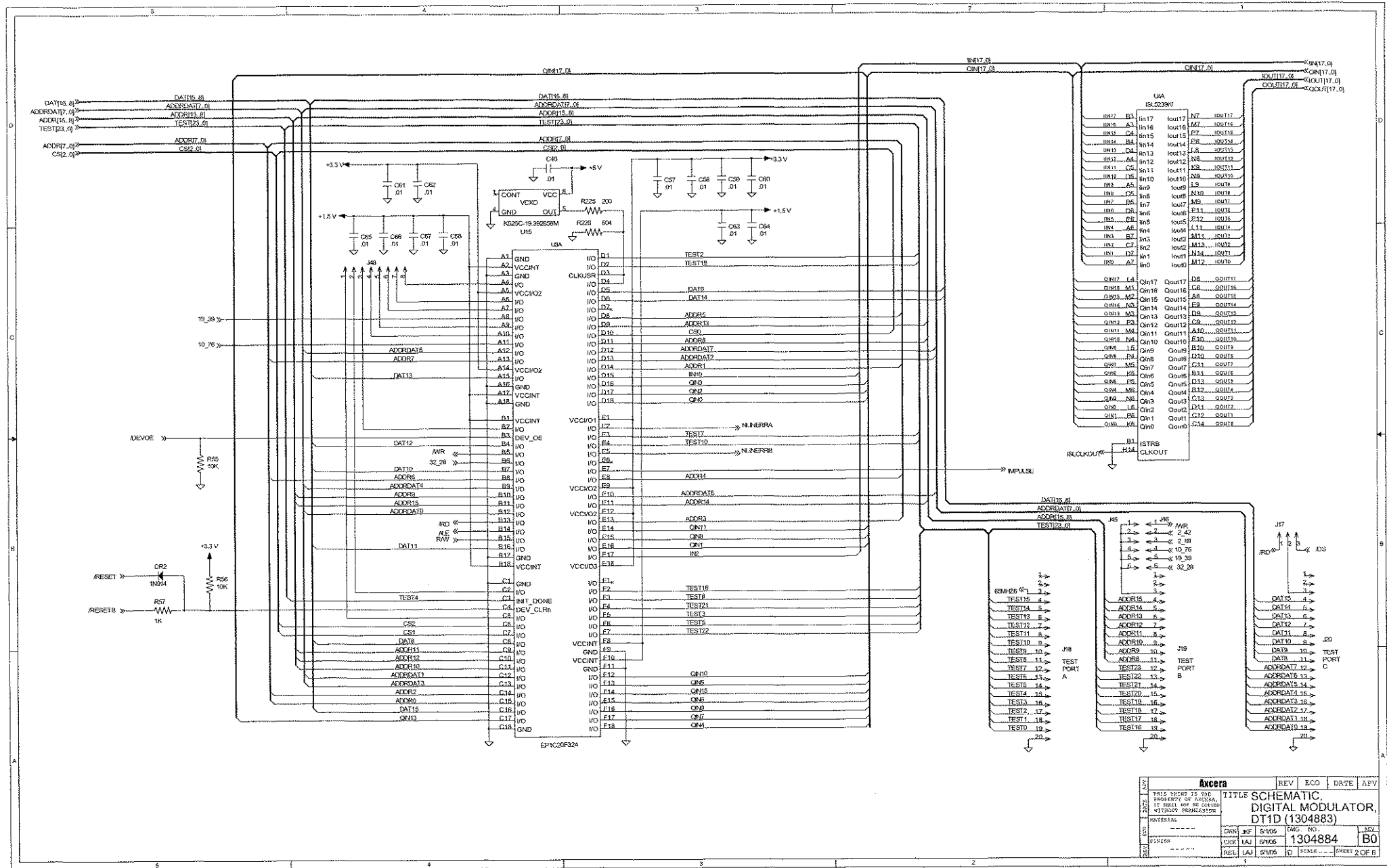
J2
R7
U2
C1

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	

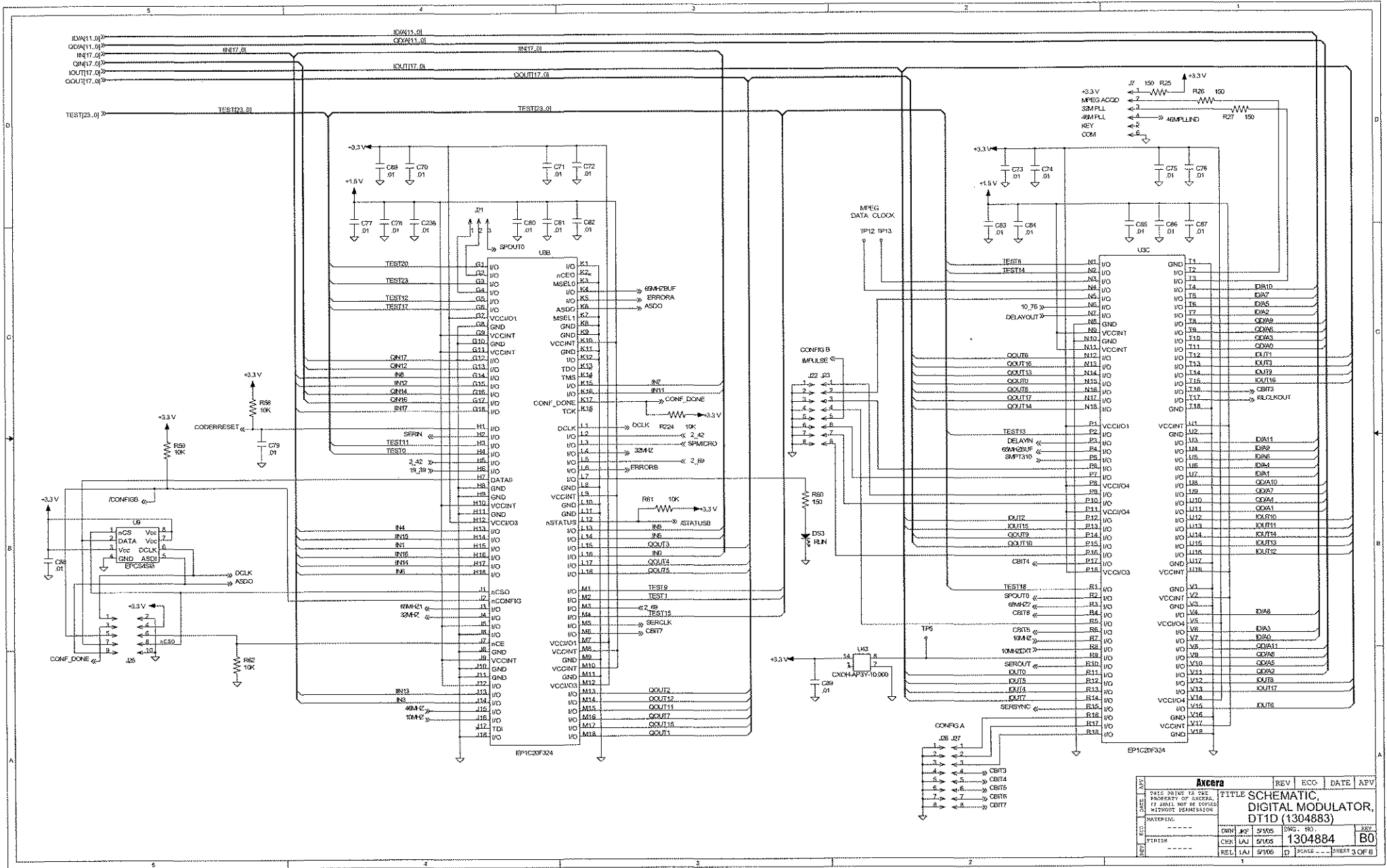


REV		ECO	DATE	APV
TITLE		DIGITAL MODULATOR		
PART NO.		DT1D (1304883)		
CHK	JF	5/106	DRG. NO.	80
CHK	LJ	5/106	1304884	
REL	LJ	5/106	D	SCALE

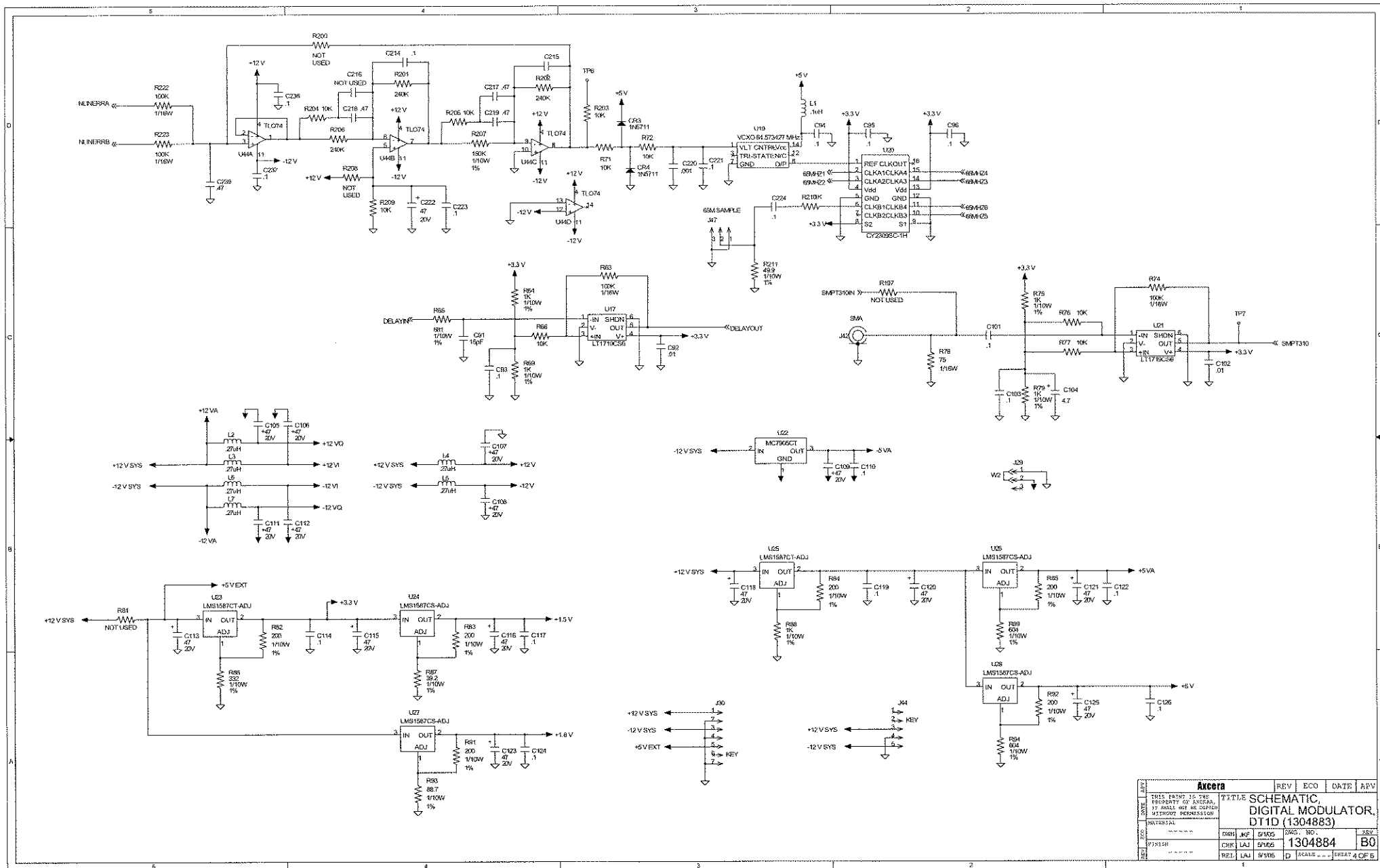
1 OF 8



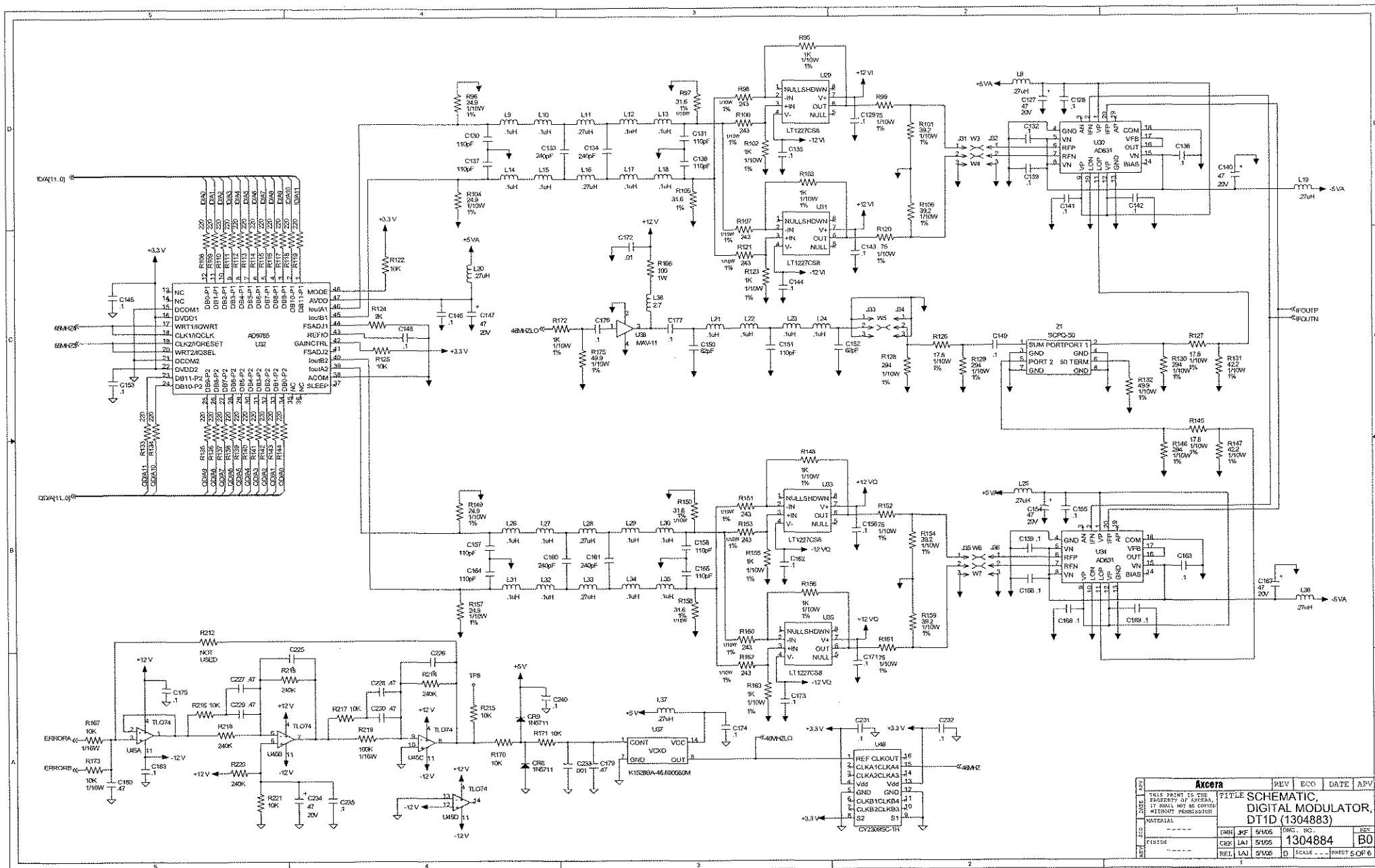
Xxcera				REV	ECO	DATE	APV
THIS PRINT IS THE PROPERTY OF Xxcera. IT SHALL NOT BE COPIED WITHOUT PERMISSION				TITLE SCHEMATIC, DIGITAL MODULATOR, DT1D (1304883)			
DESIGNER	CHK	APP	DATE	ENG. NO.	REV		
FINISH	CHK	LAJ	5/05	1304884	B0		
REL	LAJ	5/05	0	SCALE	SHEET 2 OF 8		



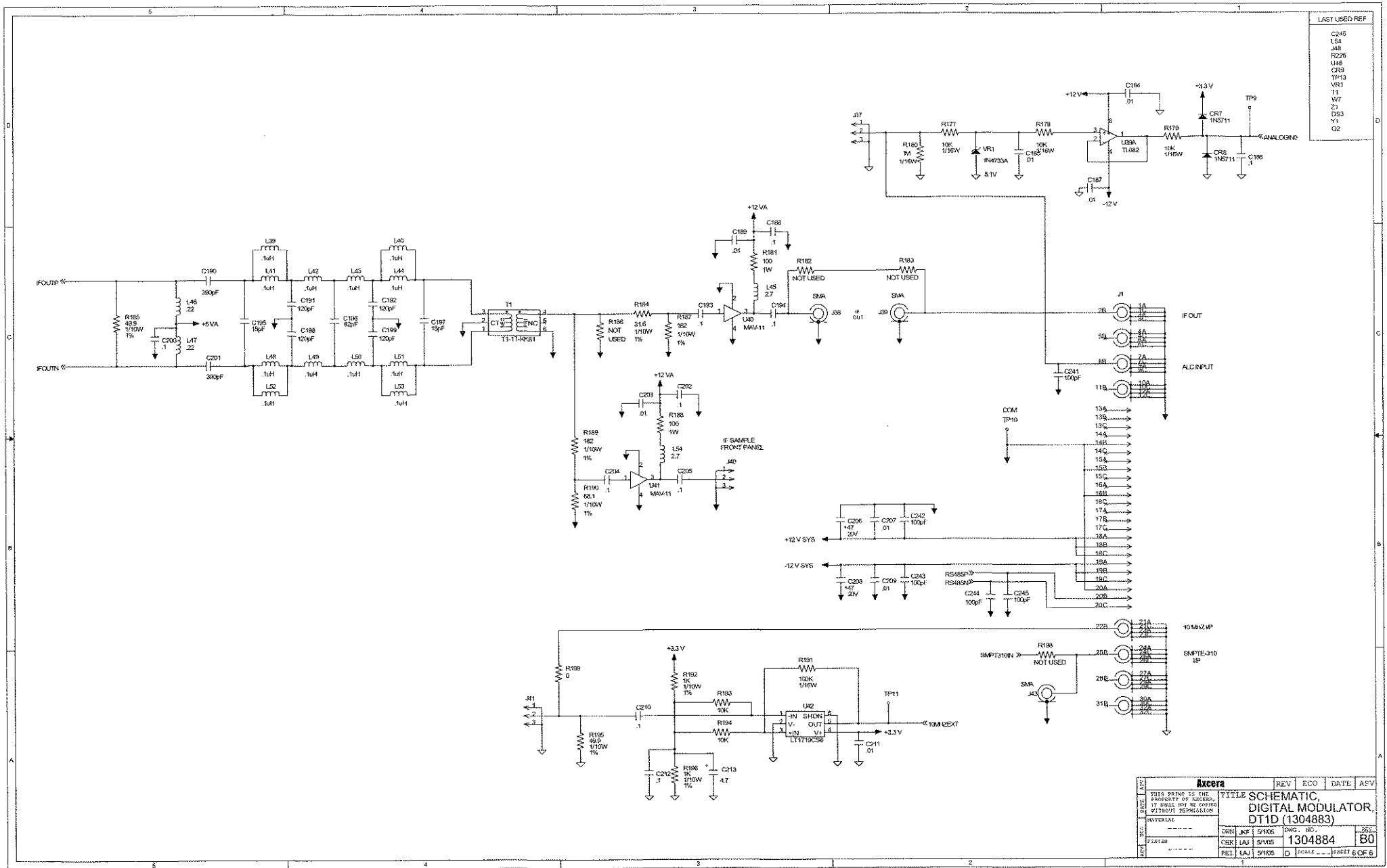
REV	ECO	DATE	APV
1	1	10/10/00	1
Xccera			
TITLE SCHEMATIC			
DIGITAL MODULATOR			
DT1D (1304883)			
DATE	DESIGN	NO.	REV.
10/10/00	1304884	1	B0
REL. LAJ	REL. LAJ	REL. LAJ	REL. LAJ



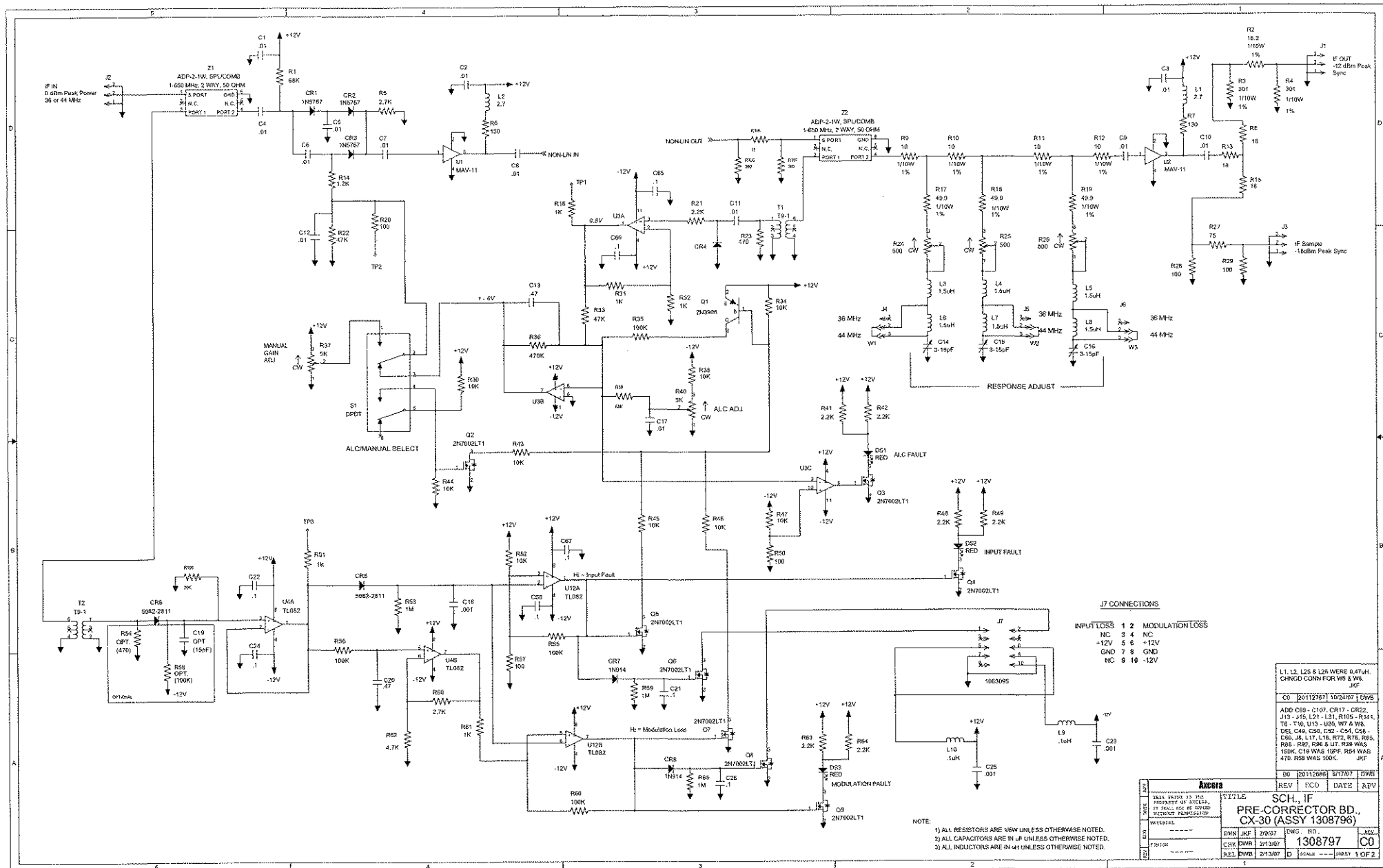
Axcera				REV	ECO	DATE	APV
THIS DRAWING IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION.				TITLE SCHEMATIC, DIGITAL MODULATOR, DT1D (1304883)			
REV	NO	DATE	BY	CHK	LAJ	SP05	REV
1315H							B0
REV	NO	DATE	BY	CHK	LAJ	SP05	REV
1315H							B0



Axcera		REV	ECO	DATE	APV
TITLE SCHEMATIC.					
DIGITAL MODULATOR.					
DT1D (1304884)					
MATERIAL		DRN	JP	5/105	DRG. NO.
FINISH		CHK	LAJ	5/105	1304884
		REL	LAJ	5/105	SCALE - - - SHEET 5 OF 6



Axcera		REV	ECO	DATE	REV
2010 PRINT IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION		TITLE SCHEMATIC, DIGITAL MODULATOR, DT1D (1304883)			
DESIGN	DATE	BY	CHK	APP	REV
1304883	1/10/05	1304884	1304884	1304884	B0
SCALE		PAGE 6 OF 6			



J7 CONNECTIONS

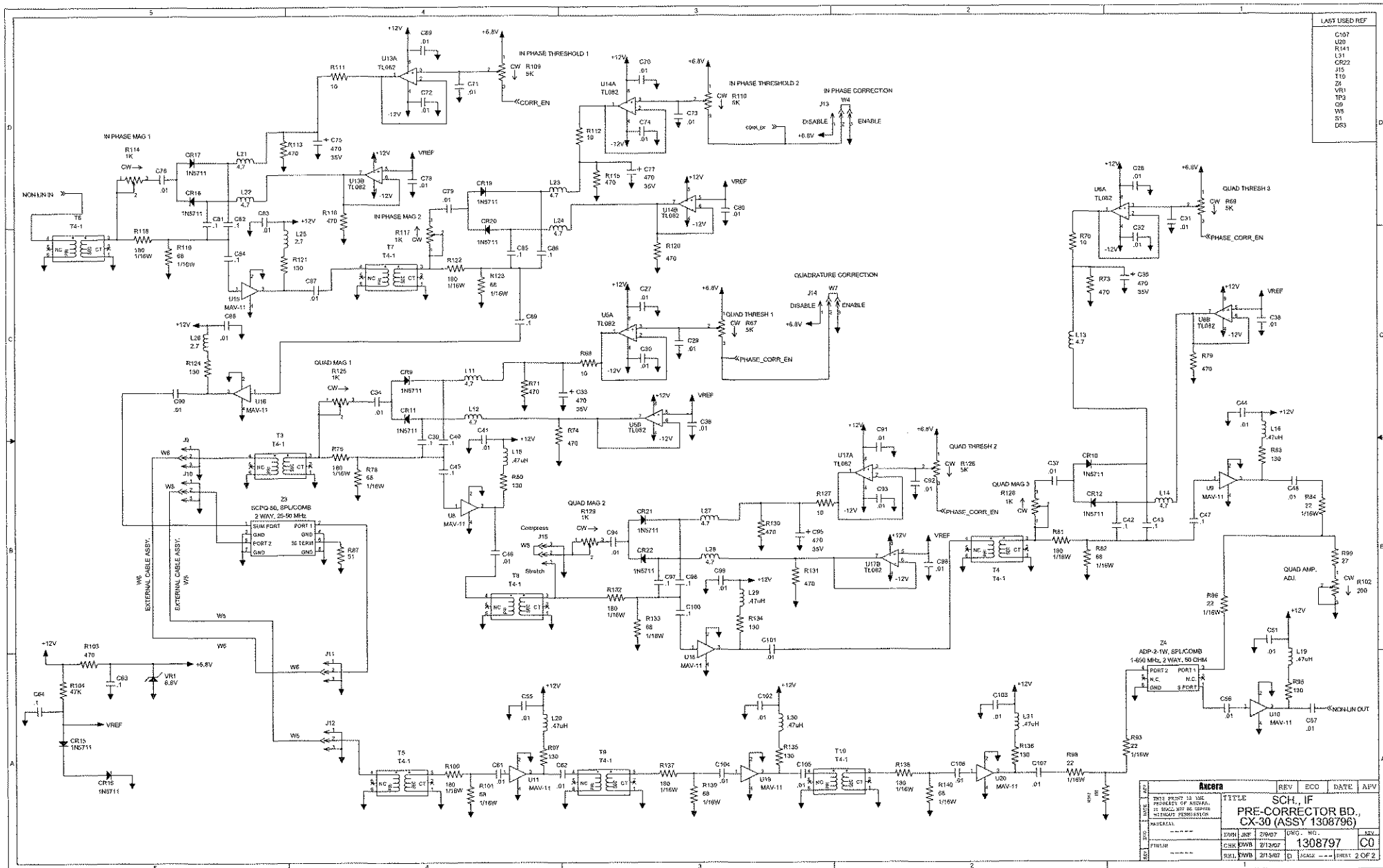
INPUT LOSS	1	2	MODULATION LOSS
NC	3	4	NC
+12V	5	6	+12V
GND	7	8	GND
NC	9	10	-12V

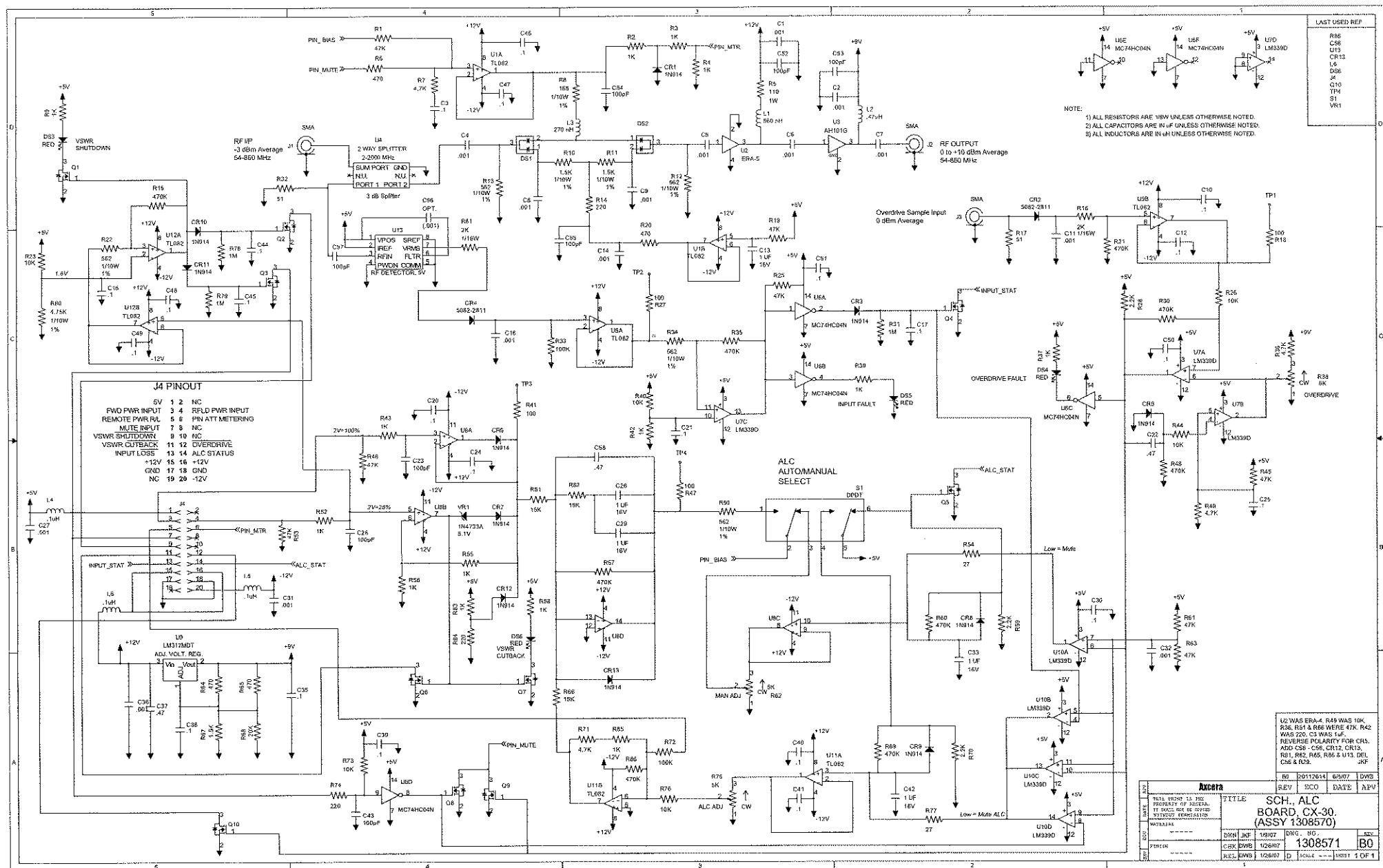
L1, L2, L25 & L26 WERE 0.47uH.
CHNGD CONV FOR V5 & W5.
J7F

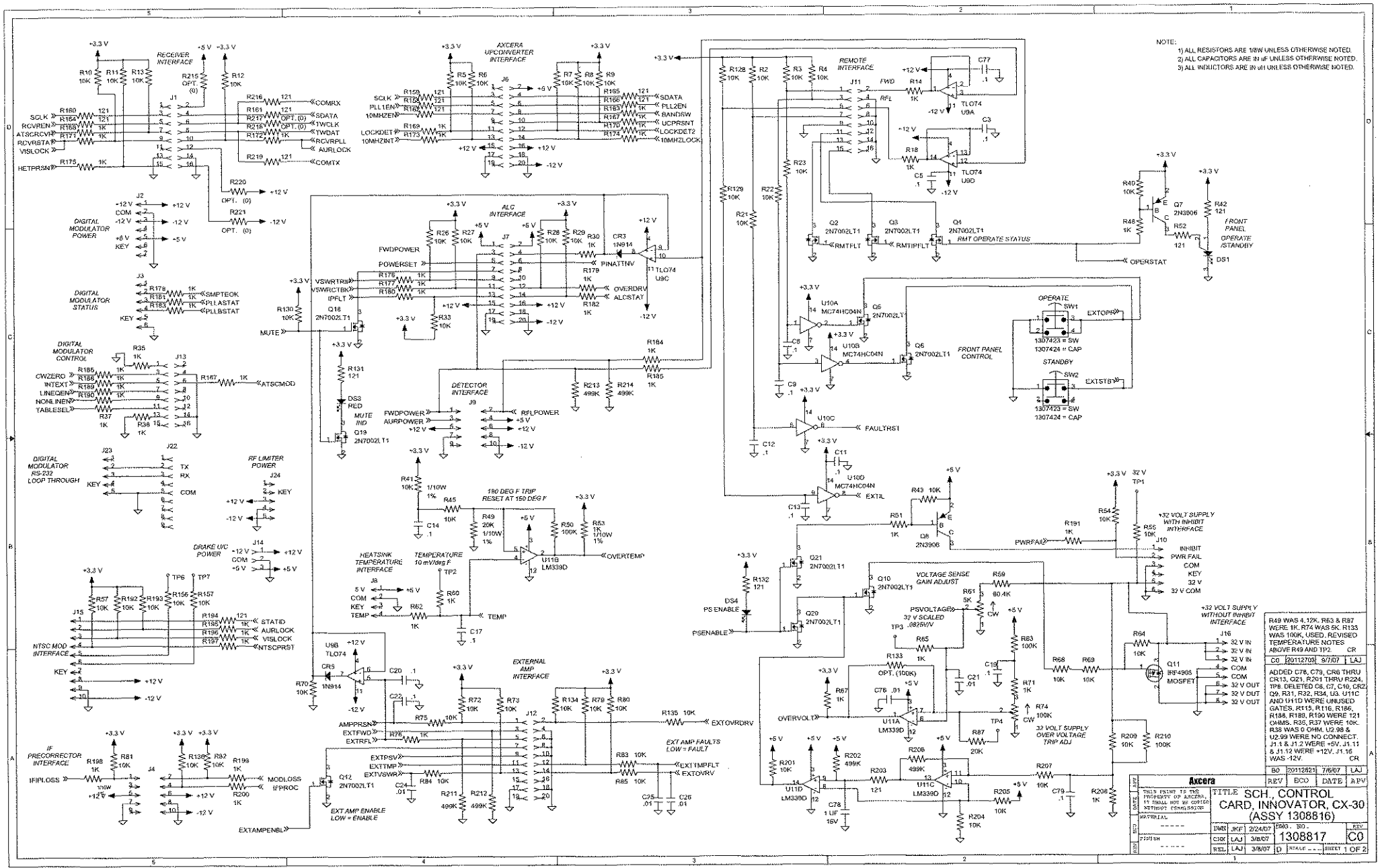
REV	ECO	DATE	APV
1		10/17/97	DWB
2		10/17/97	DWB
3		10/17/97	DWB
4		10/17/97	DWB
5		10/17/97	DWB
6		10/17/97	DWB
7		10/17/97	DWB
8		10/17/97	DWB
9		10/17/97	DWB
10		10/17/97	DWB

SCH. IF
PRE-CORRECTOR BD.
CX-30 (ASSY 1308796)

DWG	CHK	DWG	CHK	DWG	CHK
20957	21307	20957	21307	20957	21307
1308797	1308797	1308797	1308797	1308797	1308797
C0	C0	C0	C0	C0	C0

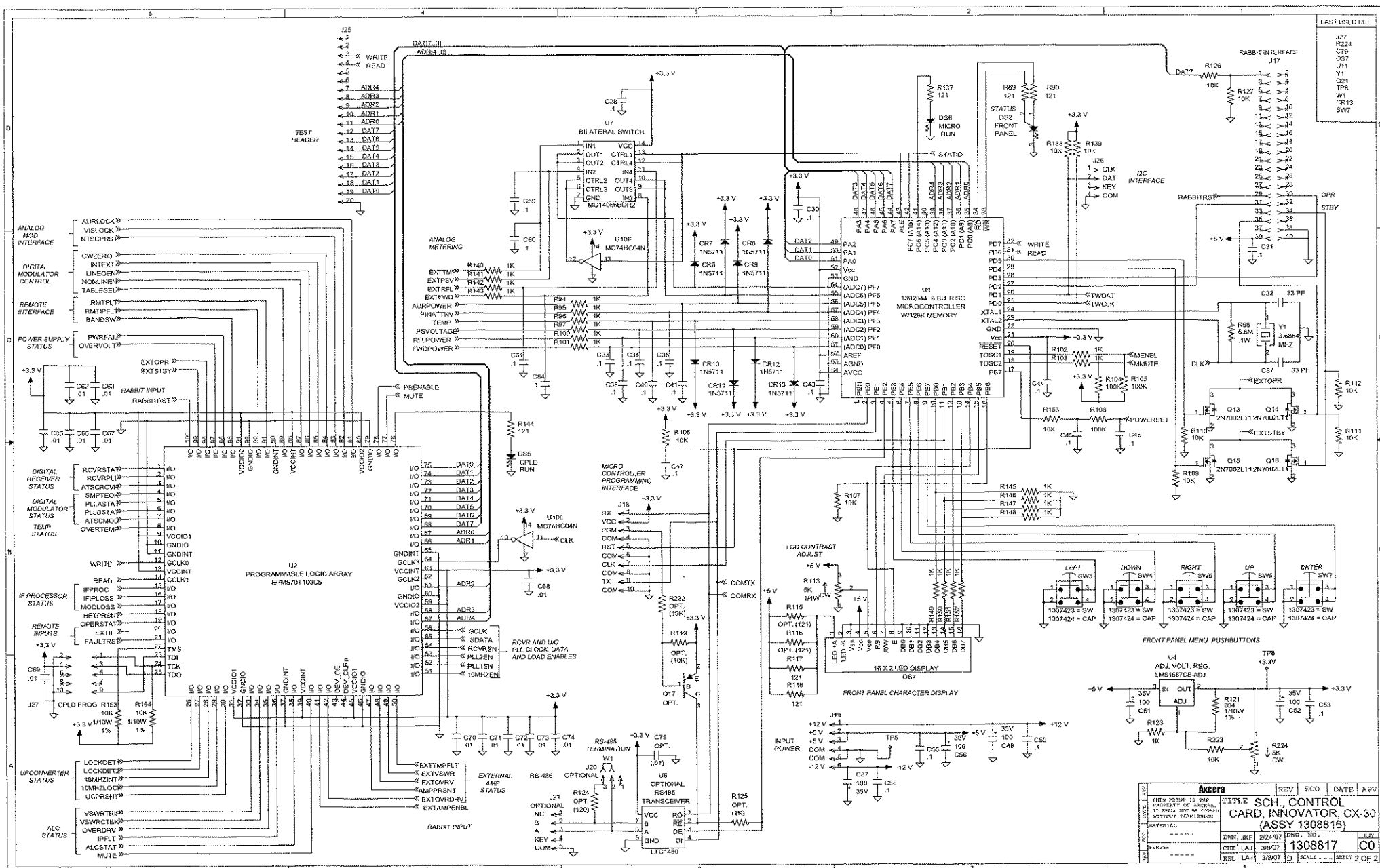




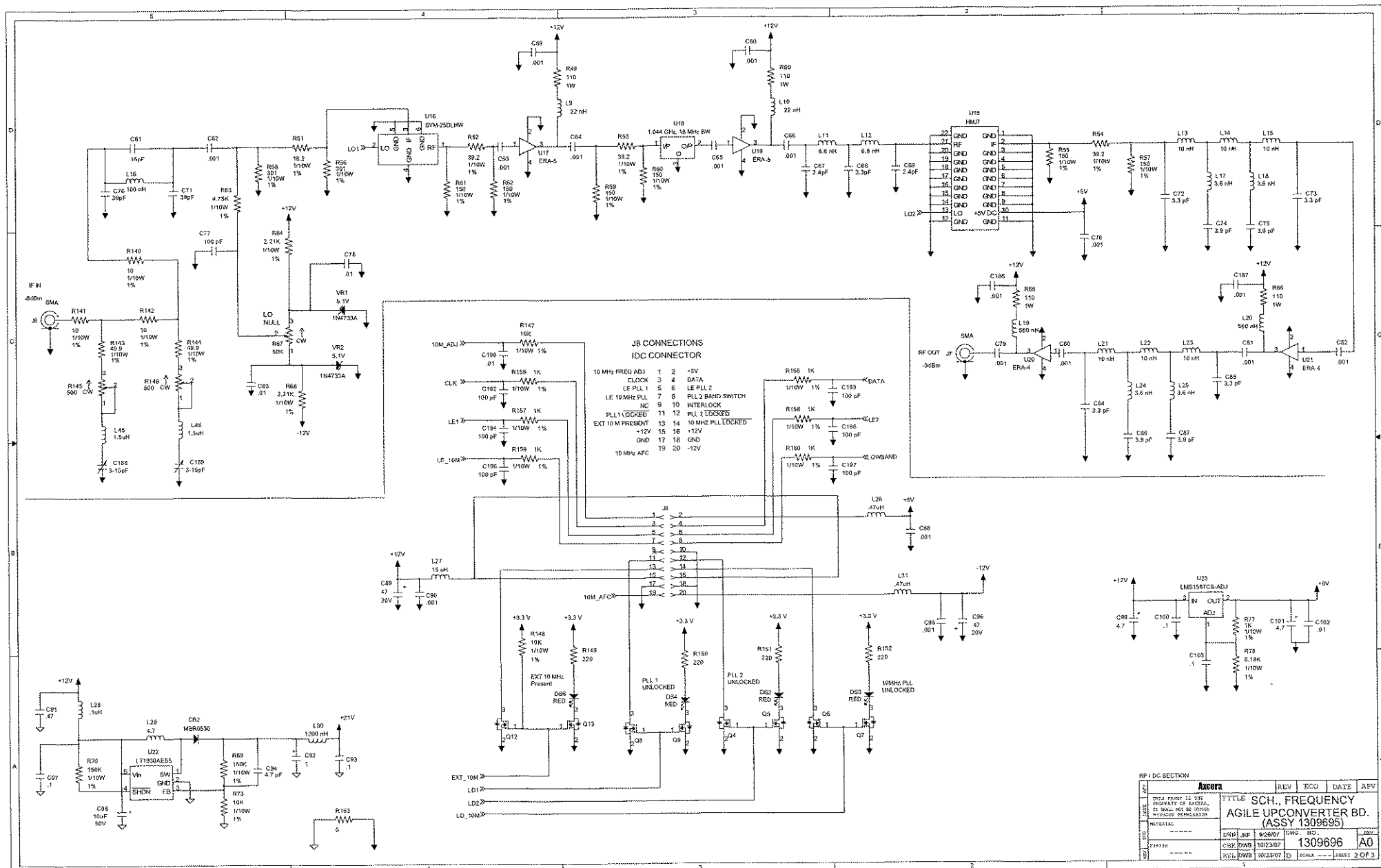


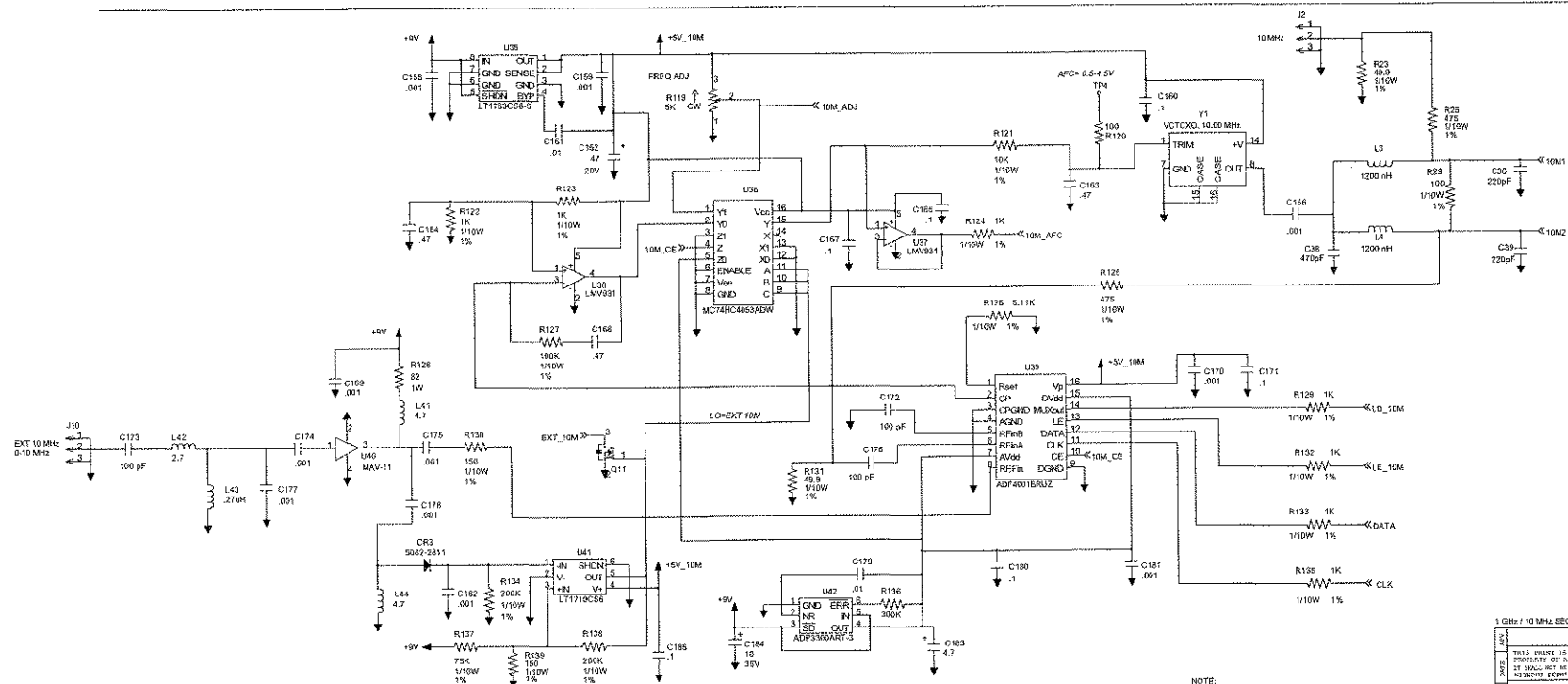
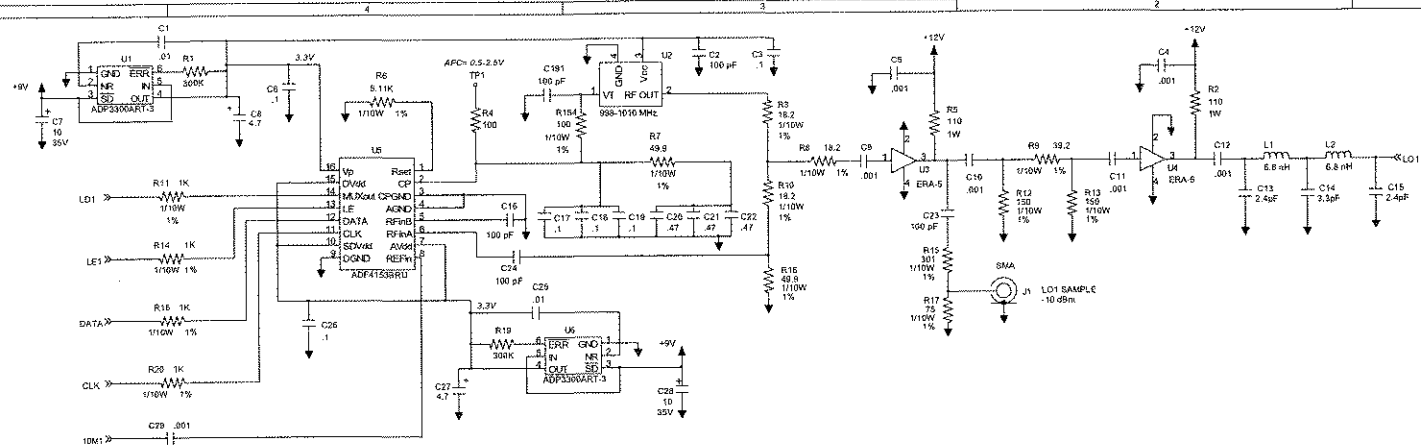
NOTE:
1) ALL RESISTORS ARE 18W UNLESS OTHERWISE NOTED.
2) ALL CAPACITORS ARE 50V UNLESS OTHERWISE NOTED.
3) ALL INDUCTORS ARE 50V UNLESS OTHERWISE NOTED.

REV 1 (1/8/07) LAJ			
REV 2 (2/24/07) BCO	REV 3 (3/8/07) LAJ	REV 4 (3/8/07) LAJ	REV 5 (3/8/07) LAJ
TITLE SCH. CONTROL CARD, INNOVATOR, CX-30 (ASSY 1308816)			
DRAWN BY LAJ			
CHECKED BY BCO			
DATE 3/8/07			
SCALE 1 OF 2			



		Axcera	REV	ECC	DATE	APV
THIS PRINT IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.	TITLE	SCH., CONTROL CARD, INNOVATOR, CX-30 (ASSY 1308816)				
NATURAL	DWN	JKF	2/24/07	PWG. NO.		CW
FINGER	CHK	LAL	3/8/07	1308817		RQ
	REL	LAL	3/8/07	D SCALE	PRINT 2 OF 2	





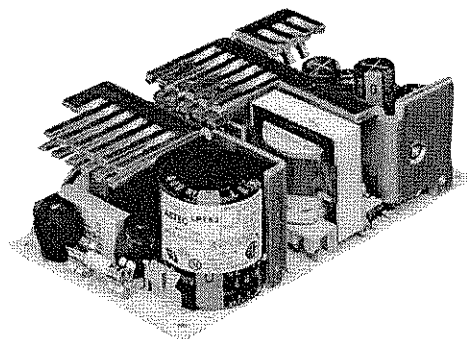
NOTE:
 1) ALL RESISTORS ARE 1/10W UNLESS OTHERWISE NOTED.
 2) ALL CAPACITORS ARE IN pF UNLESS OTHERWISE NOTED.
 3) ALL INDUCTORS ARE IN nH UNLESS OTHERWISE NOTED.

1 GHz / 10 MHz SECTION		REV	ECO	DATE	APV
AGILE UPCONVERTER BD.					
TITLE		DWG	NO.		
AGILE UPCONVERTER BD.					
(ASSY 1309695)					
DRAWN		3/28/07	DWG	NO.	
CHKD		10/23/07			
REL		10/23/07	D	SCALE	ASST 1 OF 3

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

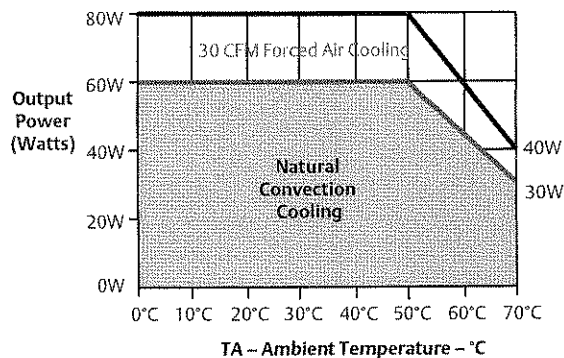
Operating temperature:	0° to 50°C ambient derate each output at 2.5% per degree from 50° to 70°C, -20°C startup
Electromagnetic susceptibility:	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity:	Operating; non-condensing 5% to 95%
Vibration:	Three orthogonal axes, sweep at 1 oct/min, 5 min. 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

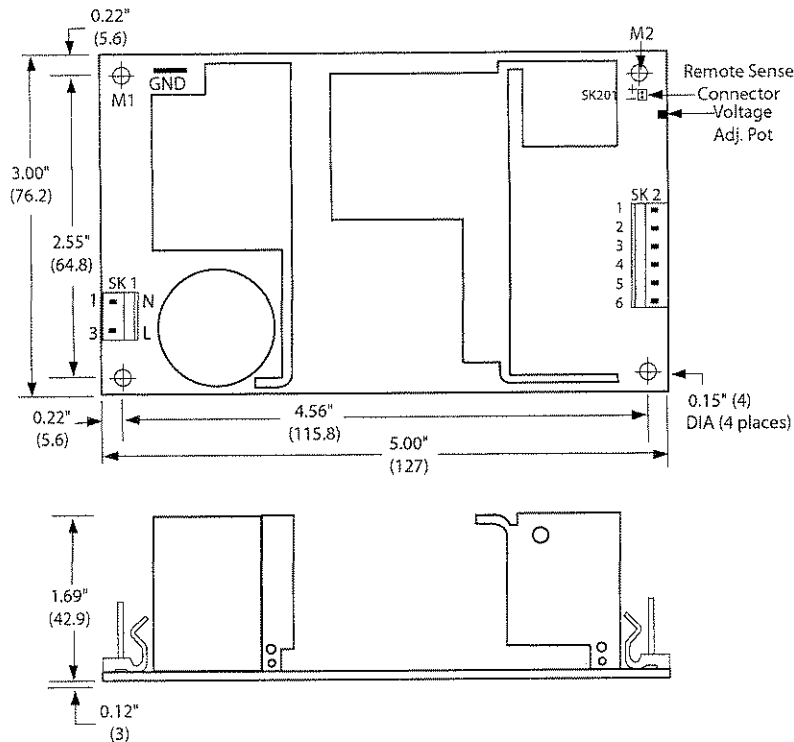
Model Number	Output Voltage	Minimum Load	Maximum Load with Convective cooling	Maximum Load with 30CFM Forced Air	Peak Load ¹	Regulation ²	Ripple P/P (PARD) ³
LPT61	+3.3V	0.7A	5A	8.5A	9.5A	±2%	50mV
	+5V	0A	2.5A	3.0A	3.3A	±2%	50mV
	+12V	0A	0.5A	1.0A	1A	±5%	120mV
LPT62	+5V	0.7A	7A	8A	10A	±2%	50mV
	+12V	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

Americas

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Carlsbad, CA 92008
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Facsimile: +1 760 930 0698

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West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

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2 Wing Yip Street, Kwun Tong
Kowloon, Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.astecpower.com

www.artesyn.com

technicalsupport@astec.com

technicalsupport@artesyn.com

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LAMBDA SWS300/600 Series

Single Output General Purpose Power Supplies



- ◆ Low Cost
- ◆ Active Power Factor Correction
- ◆ Universal Input (85 - 265VAC)
- ◆ Input Transient Protected IEC61000-4
- ◆ SEMI F47 Certified (208VAC Input)

RoHS

Key Market Segments & Applications

Factory Automation	Process Control, NC-Machining, Automotive, Packaging Equipment, Materials Handling, Chemical Processing, Robots
Test & Measurement	Burn-in & Test, Automated, Detection Test, Instrumentation, Measurement
Automated Service	Vending Machines, Elevators, Video Gaming, Point of Sale Equipment

SWS Features and Benefits

Feature

- ◆ Meets IEC61000-4
- ◆ Global safety Approvals
- ◆ Power Factor Corrected
- ◆ Level B EMI

Benefit

- ◆ Greater reliability
- ◆ Supports Global Use
- ◆ Supports Global Use
- ◆ Assists System Compliance

Specifications

MODEL		SWS300	SWS600
ITEMS			
Input Voltage range (1)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC	
Inrush Current (115 / 230VAC)	A	20 / 40 at 25°C, cold start	
Power Factor	-	Meets EN61000-3-2	
Input Current (100/200VAC)	A	3.6 / 1.8A	7.2 / 3.6A
Temperature Coefficient	-	<0.02%/°C	
Overcurrent Protection	--	>105%, Constant current style	
Overvoltage Protection	V	3.3V: 4.1-5.3V, 5V: 6.25-7.5V, 12V: 13.8-16.8V	
		15V: 19.3-24.2V, 24V: 30-34.8V, 36V: 41.4-50.4V, 48V: 60-69.6V	
Overtemperature Protection	-	Yes, cycle AC to reset	
Hold Up Time (Typ)	ms	20ms at 115/230VAC	
Leakage Current (max)	mA	SWS300: 0.75mA, SWS600: 1.5mA	
Remote Sense	-	None	Yes
Parallel Connection	-	None	Yes
Remote On/Off	-	None	Yes, >4.5V to shutdown
Power Fail Signal	-	None	Yes, open collector output
LED Indicator	-	Green LED = On	
Operating Temperature	-	-10 to +65°C (See table for derating - model specific)	
Storage Temperature	°C	-30 to +85°C	
Humidity (non-condensing)	-	30 - 90% RH operating, 10 - 95%RH non operating	
Cooling	-	Internal fan	
Withstand Voltage	-	I/P to Grnd 2kVAC, I/P to O/P 3kVAC, O/P to Grnd 500VAC, O/P to CNT 100VAC for 1 min	
Isolation Resistance	-	>100M at 25C & 70%RH, Output to Ground 500VDC	
Vibration (non operating)	-	10 - 55Hz (sweep for 1 min) 19.6m/s ² constant X, Y, Z 1 hour each plane)	
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -8, -11	
Safety Agency Approvals	-	UL60950-1, CSA60950-1, EN60950-1, EN50178, CE Mark, SEMI F47 (208VAC)	
Conducted & Radiated EMI	-	EN55011 / EN55022-B, FCC Class B	
Recommended EMI Filter	-	MC1206	MC1210
Weight (Typ)	g	950	2000
Size (WxHxD)	in	2.05 x 4.01 x 7.8"	3.62 x 4.72 x 7.48"
Warranty	yrs	Two Years	

Notes: (1) Derate linearly to 80% load from 115VAC to 85VAC input (derate to 90% load for SWS600-5, no derating SWS300, 600-3)

LAMBDA SWS300/600 Series

Model Selector

Model	Voltage	Adjust Range	Max Curr. (A)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Eff.(3) (typ)%
SWS300-3	3.3V	2.97-3.96V	55	40	20	120	67/70
SWS300-5	5V	4.5-6V	55	40	20	120	75/78
SWS300-12	12V	9.6-13.2V	26	96	48	120	77/80
SWS300-15	15V	13.2-18.6V	21	120	48	120	79/83
SWS300-24	24V	20-28.8V	13	120	48	150	80/84
SWS300-36	36V	28.8-40V	8.7	180	72	200	82/85
SWS300-48	48V	40-57.6V	6.7	240	96	240	82/85
SWS600-3	3.3V	2.97-3.96V	100 (2)	40	20	100	69/71
SWS600-5	5V	4.5-6V	100 (2)	40	20	100	74/77
SWS600-12	12V	9.6-13.2V	50	96	48	120	78/81
SWS600-15	15V	13.2-18.6V	40	120	48	120	80/83
SWS600-24	24V	20-28.8V	25	120	48	150	81/84
SWS600-36	36V	28.8-40V	16.7	180	72	200	81/85
SWS600-48	48V	40-57.6V	12.5	240	96	240	82/85

Notes:

(2) Peak rating of 120A for 10s

(3) 115/230VAC

Derating

Model	50°C	55°C	60°C	65°C
SWS300	100%	91.6%	83.3%	50%
SWS600	100%	85%	70%	55%

Additional derating required when operating SWS600 with side ventilation holes blocked - see installation manual.

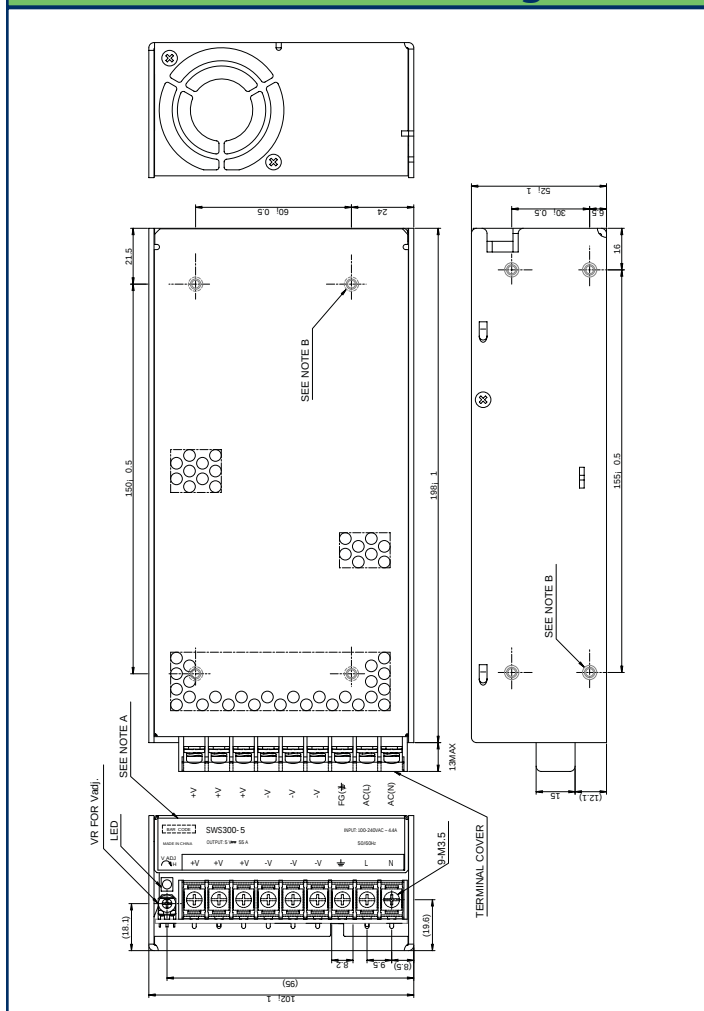
Options

Suffix	Descriptor
/CO2	Double sided conformal coating

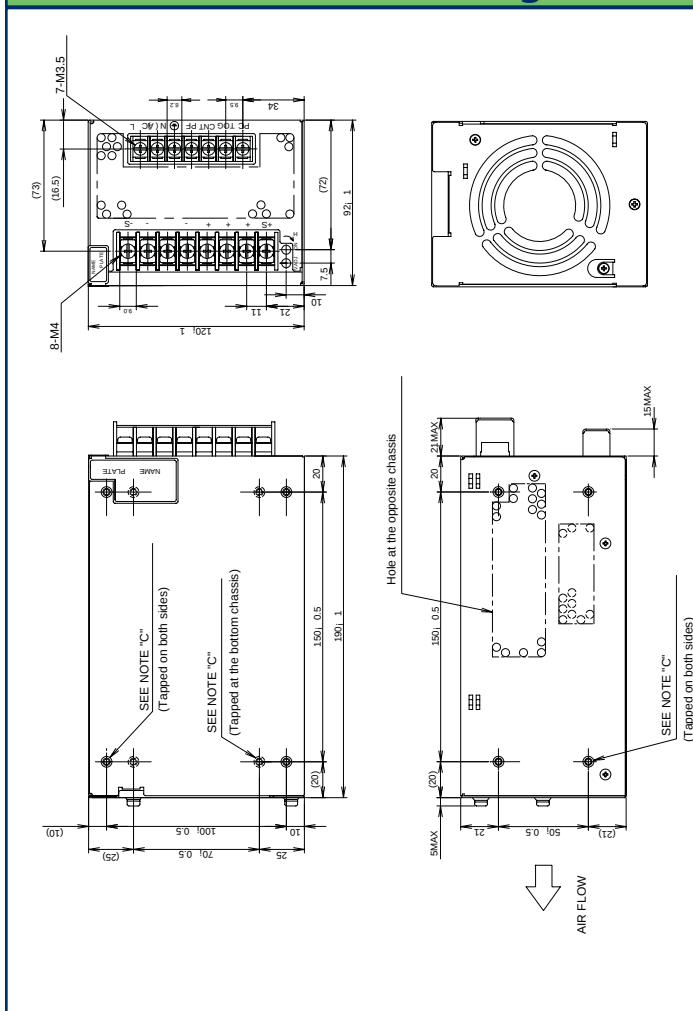
Other Lambda Industrial Products

HWS 15-1500W Single Output, High Reliability
 SWS 50-150W Single Output
 ZWS 5-240W PCB style Single Output

SWS300 Outline Drawing

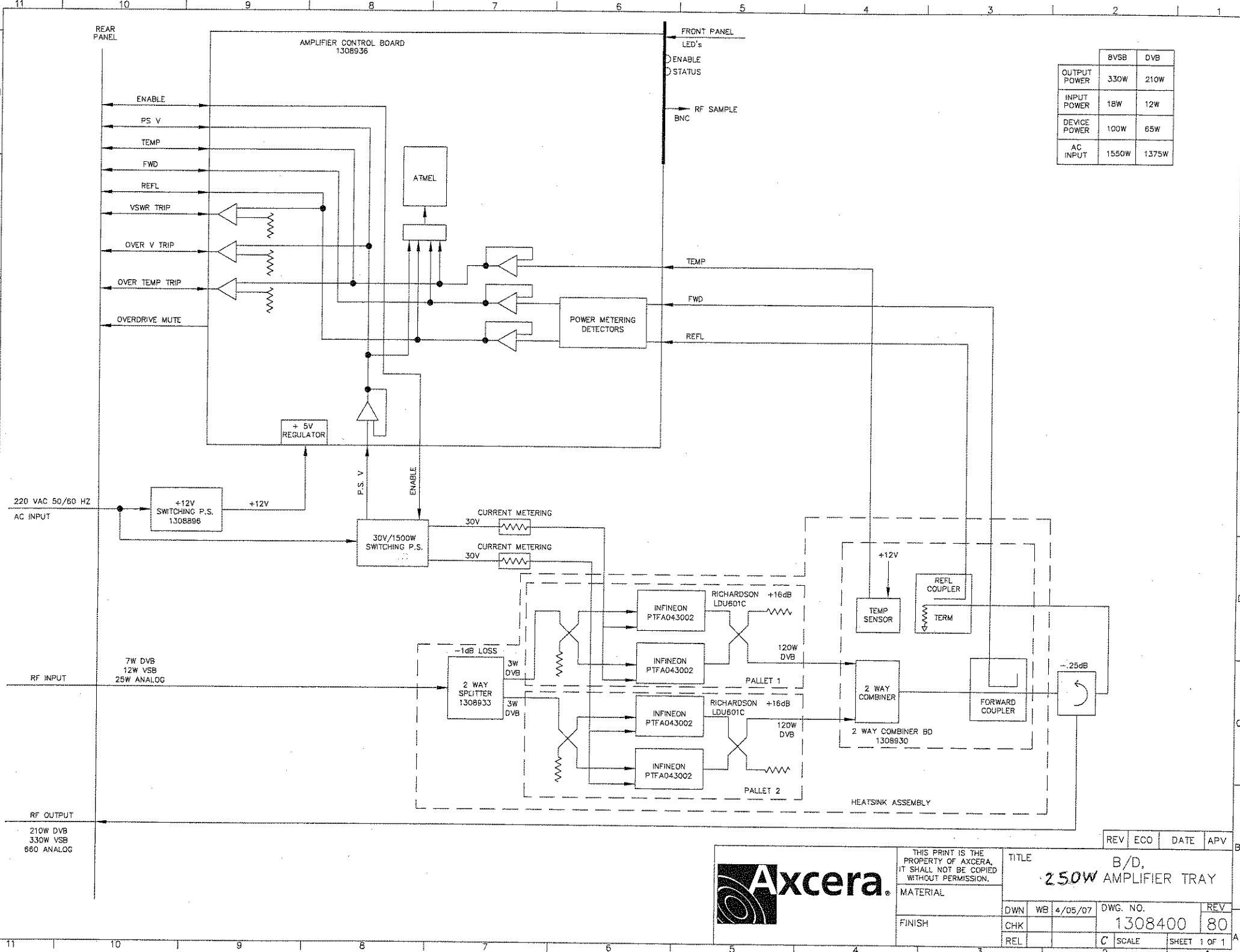


SWS600 Outline Drawing



For Additional Information, please visit
www.lambdapower.com/products/sws-series.htm

	8VSB	DVB
OUTPUT POWER	330W	210W
INPUT POWER	18W	12W
DEVICE POWER	100W	65W
AC INPUT	1550W	1375W



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TITLE B/D, 250W AMPLIFIER TRAY

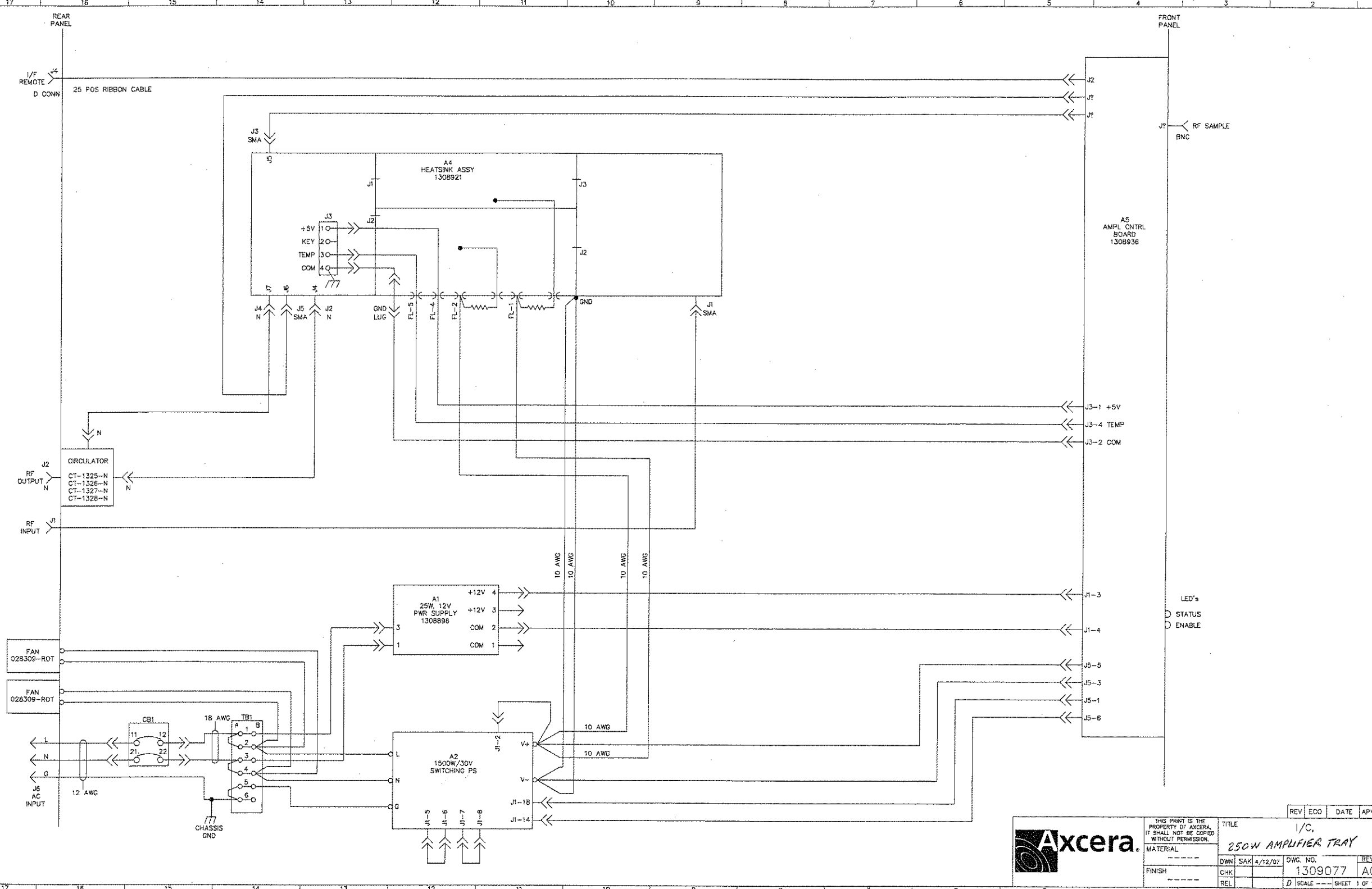
MATERIAL

FINISH

REV ECO DATE APV

DWN WB 4/05/07 DWG. NO. 1308400

CHK REL C SCALE SHEET 1 OF 1





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MATERIAL: _____

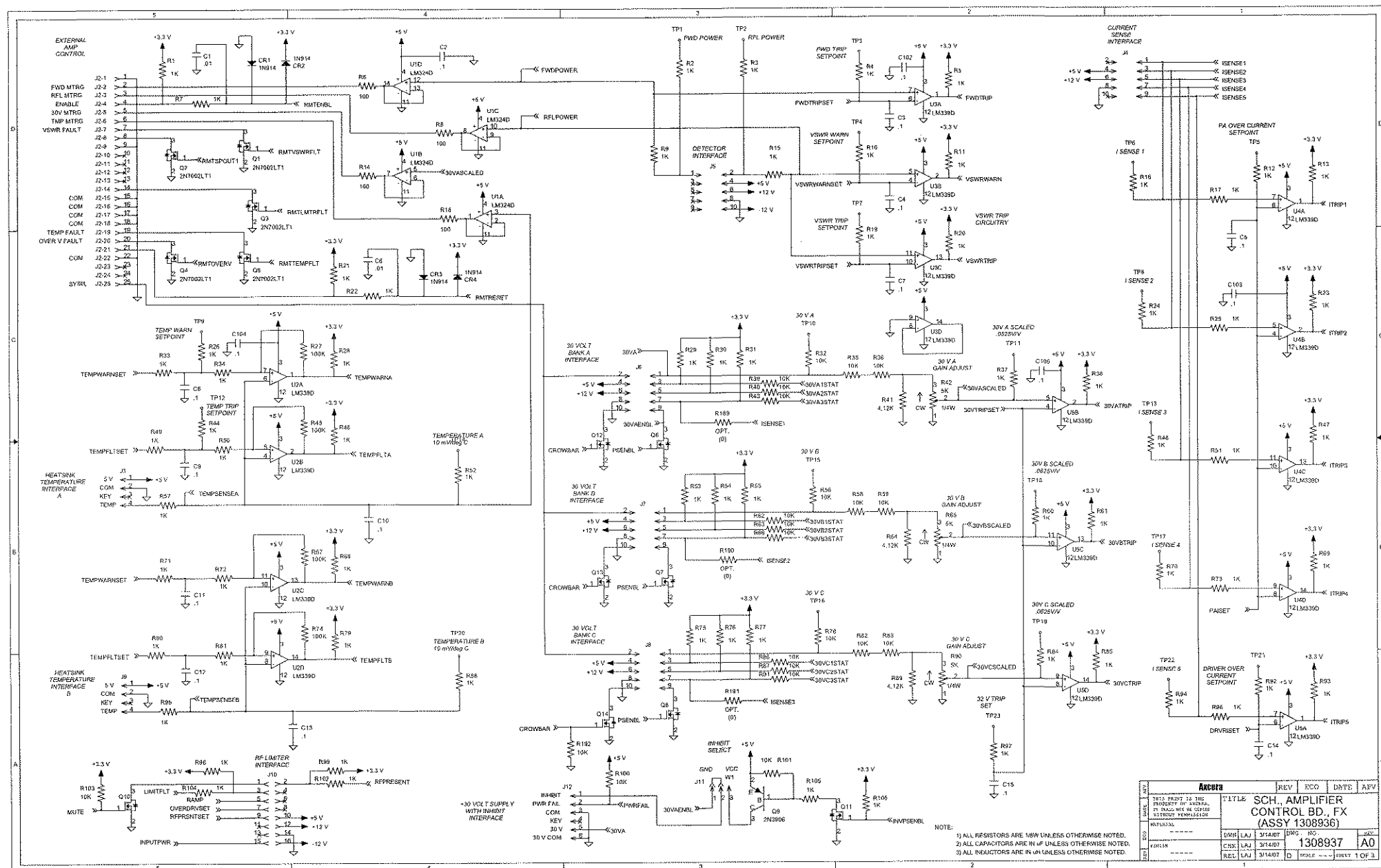
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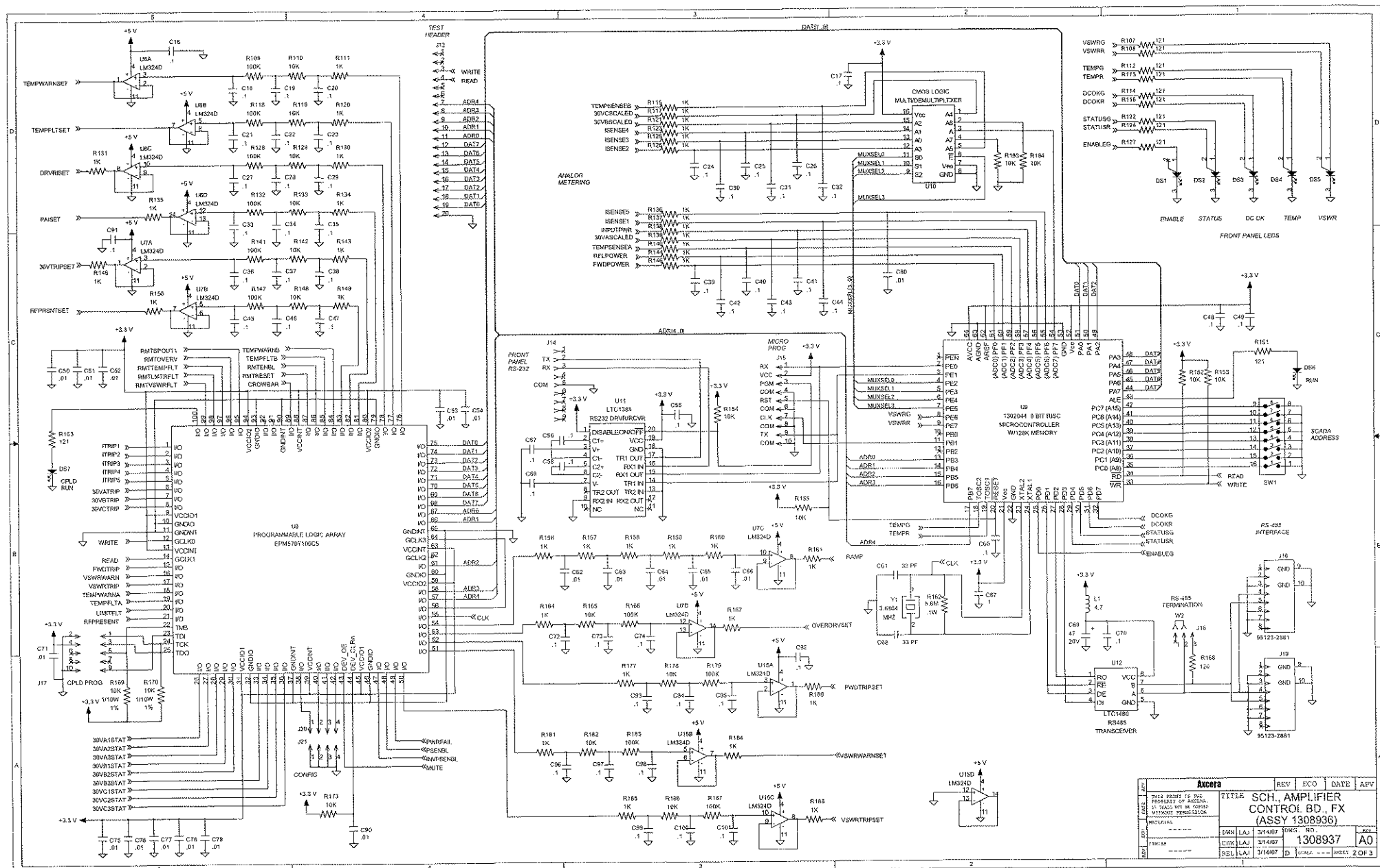
TITLE: I/C, 250W AMPLIFIER TRAY

DWN: SAK	4/12/07	DWG. NO. 1309077	REV. A0
CHK: _____	_____	_____	_____
REL: _____	_____	_____	_____

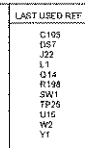
D SCALE --- SHEET 1 OF 1

REV	ECO	DATE	APV

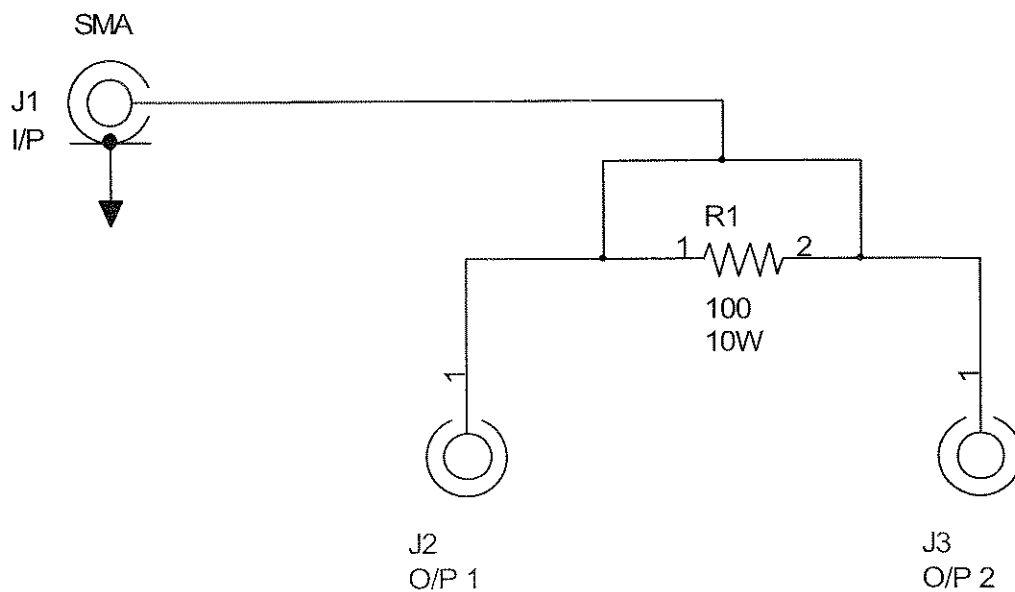
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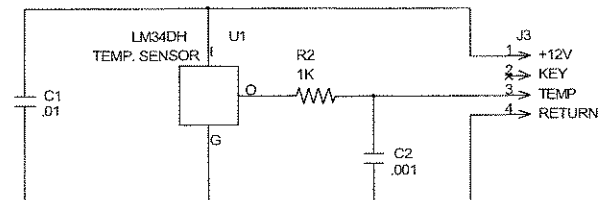
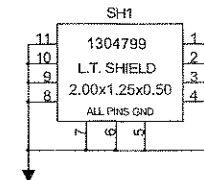
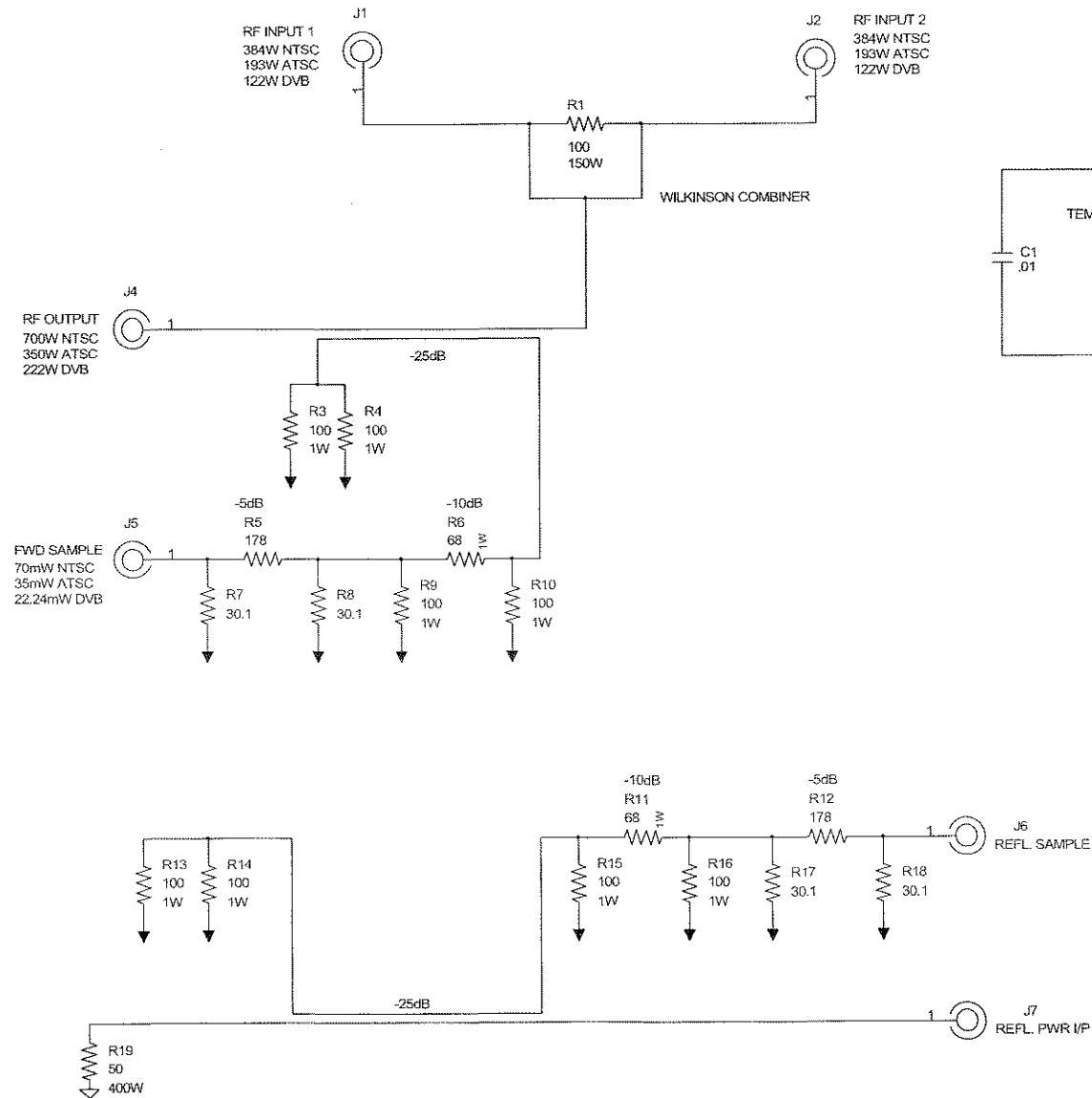
REV		ECO	DATE	APP
TITLE SCH. AMPLIFIER CONTROL BD., FX (ASSY 1308937)				
DATE	3/14/07	3/14/07	1308937	A0
DESIGNER	LAJ	LAJ	LAJ	LAJ
CHECKED	LAJ	LAJ	LAJ	LAJ
REVIEWED	LAJ	LAJ	LAJ	LAJ
REL	LAJ	LAJ	LAJ	LAJ



REV		ECO		DATE		APV	
Ancora							
THIS PRINT IS THE PROPERTY OF ANCORA. IT SHALL NOT BE COPIED WITHOUT PERMISSION		TITLE					
		SCH., AMPLIFIER CONTROL BD., FX (ASSY 1308936)					
MATERIAL							
-----		DNR LAJ		3/14/87		DRG. NO.	
		CHK LAJ		3/14/87		1308937	
FINISH		REL LAJ		3/14/87		REV	
						A0	
				D		PAGE --- SHEET 3 OF 3	



APV				Axcera				REV		ECO		DATE		APV			
DATE				THIS PRINT IS THE PROPERTY OF AXCERA, IT SHALL NOT BE COPIED WITHOUT PERMISSION				TITLE SCH., 2 WAY SPLITTER, FX (1308933)									
ECO				MATERIAL -----													
REV				FINISH -----		DWN		JKF		3/15/07		DWG. NO. 1308934				REV A0	
						CHK		PWK		3/16/07							
						REL		PWK		3/16/07		A		SCALE ----		SHEET 1 OF 1	



LAST USED REF
SH1
J7
R19
U1
C2

- NOTE:
- 1) ALL RESISTORS ARE 1/W UNLESS OTHERWISE NOTED.
 - 2) ALL CAPACITORS ARE IN uF UNLESS OTHERWISE NOTED.
 - 3) ALL INDUCTORS ARE IN uH UNLESS OTHERWISE NOTED.

Axcera				REV	ECO	DATE	APV
THIS PRINT IS THE PROPERTY OF AXCERA, IT SHALL NOT BE COPIED WITHOUT PERMISSION				TITLE SCH., 2 WAY COMBINER BD., FX (ASSY 1308930)			
MATERIAL	-----	DWN	JKF	3/28/07	DWG. NO.	1308931	REV
FINISH	-----	CHK	PWK	3/29/07	SCALE	---	A0
REV	ECO	REL	PWK	3/29/07	C	SCALE	SHEET 1 OF 1

PRELIMINARY

600W pep –27dBc min LDMOS Technology

Designed for analog and digital TV transposers and transmitters, this amplifier incorporates micro-strip technology and push-pull LDMOS to enhance ruggedness and reliability. Patented bias control and matching circuit.

- 470 - 862 MHz
- (28 ÷ 32 Volt) 30 Nominal
- Input/Output 50Ω - 50Ω
- P_{out} : 600W pep –27 dBc min (two-tone test 6MHz spacing)
- Gain : 13 dB min; 15 dB typ
- Class AB
- Devices: PTFA043002E or equivalent
- Connectorized version available
- No mechanical trimmers - maximizes MTBF



ABSOLUTE MAXIMUM RATINGS (Device Flange T = 70 °C)

Symbol	Parameter	Value	Unit
V _S	Voltage Supply (without RF)	35	V dc
I _S	Current Supply	40	A dc
T _{stg}	Storage Temperature Range	-20 + 80	°C
T _c	Operating Base Plate Temperature ¹	0 + 75 ²	°C
ψ	VSWR max	3:1 all phase angle	-
	Max input power	See note ³	-
	Max cw output power	400	Watt

ELECTRICAL SPECIFICATIONS (Base Plate T.= 45 °C, 50Ω loaded, Vd = 30 V)

Symbol	Parameter	Test Conditions	Min	Value Typ.	Max	Unit
BW	Bandwidth	P _{out} = 300 W (CW)	470		862	MHz
G _p	Power gain	P _{ref} = 200 W (CW)	13	15	-	dB
P _{out} – 1dB	Power Output @ 1dB Compression	Referred to P _{out} = 80W (CW) ⁴	400	550	-	W
I _q *	Quiescent Current	P _{out} = 0 W – Total * ⁵	-	-	4.0	A
I _{tot}	@ P _{Max}	450W Ps Black Level Video + Audio	-	-	30	A
I _{rl}	Input return loss	P _{out} = 300 W CW	16	20	-	dB
ψ	Load mismatch	P _{ref} = 300 W CW, f = 862MHz, load VSWR = 2:1, all phase angles	No degradation in P _{out}			
Gr	Gain Flatness	P _{ref} = 300 W CW, BW: 470-862MHz		±0.5	±1.5	dB
η	Drain Efficiency	P _{out} = 400 W ⁶ (CW)	40	45	-	%
	P _{out} separate ampl.	Sync. Compression < 1dB without correction	450			Wps
	P _{out} common ampl.	P _{out} 450W ps common ampl. dual sound, with Red Field sound 1 @ -13dB and sound 2 @ -20dB without precorrection	-46	-50		dBc
	P _{out} DVB-T	P _{out} 120Wrms without precorrection	-28	-32		dBc

¹ A temperature sensor is mounted on the circuit to have an immediate working temperature measurement.

² **Warning:** The base plate temperature must be 75 °C max, using an appropriate heatsink.

³ The input power must not exceed +6dB, for 1 microsec., the nominal input power referred to the 1dBcp power output.

⁴ Max 300W CW continuous work

⁵ The Quiescent Current is set at typical value, in factory. This parameter can be adjusted by the final user depending on the applied signal and/or frequency and output power (See LDMOS Technology Note). (**Warning:** Do not exceed the specified max I_q value).

* Depending of handling signal (analog /digital)

⁶ Do not keep the amplifier working at this P_{out} for more than one minute

Contact Res-Ingenium, +39 0763 316333 Fax +39 0763316002- or visit www.res-ingenium.com for a complete listing.



SMART BIAS SPECIAL FEATURES

- No mechanical trimmers to increase reliability
- Unmatched stability of the rest current (I_q) in the range of -30 to +100 deg.C (flange temperature)
- Built-in over temperature protection
- Built-in soft start for switch-on at extreme low temperatures (for outdoor application)
- Bias factory settings stored in memory

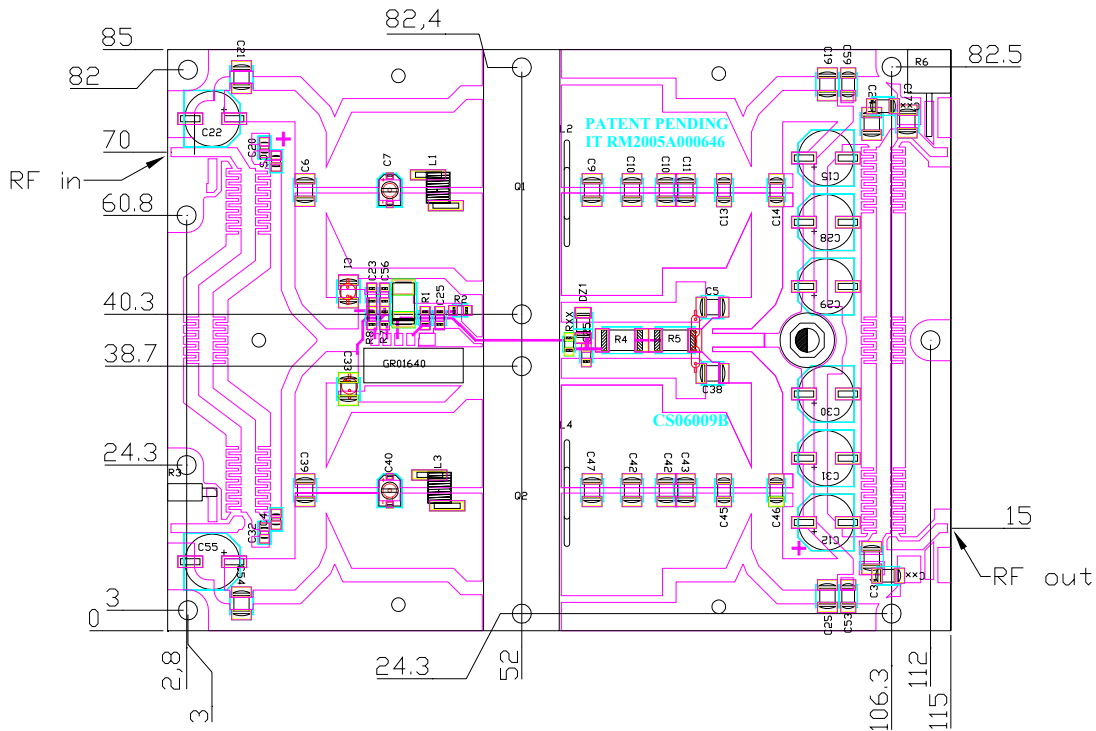
IR COMMANDS

- Current control (Left and right power device)
- Shut down (pallet switch-off)
- Look-up table bias values activation via IR port (Bias factory settings stored in memory)

Note

IR bias control unit (shown above with LDU601C) is available upon request.

LDU601C Layout and Connections



NOTE. In response to customer request, this pallet has been designed to allow two different positions of IN/OUT connections:
/TL = connection on the left side, /TR = connection on the right side.

HEATSINK MOUNTING/HARDWARE

1. HEATSINK TOOLING

- Planarity: typical value 0.8
- Roughness: better than 0.03 mm

2. THERMAL COMPOUND

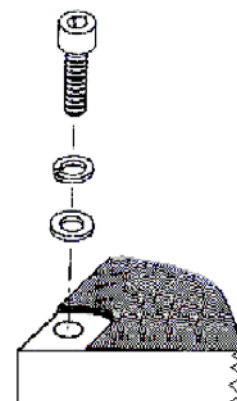
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

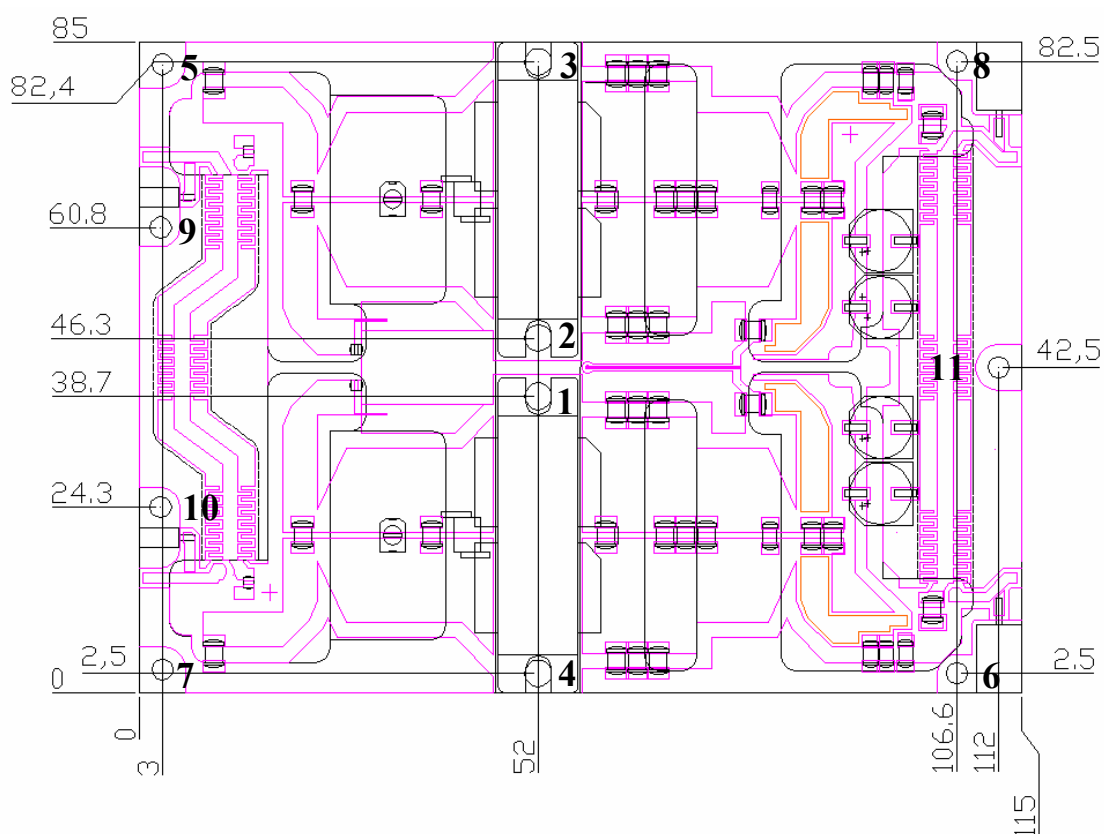
3. SCREWS

- 11 x M2.5 - Socket head cap screws.
- 8 Split lock washers WZ Ø3 + 8 Flat washers ZU Ø3.
- The recommended Torque is 12 Kg/cm for M3 type screws and 10 Kg/cm for M2.5 type screws.

4. TIGHTENING ORDER

- See next figure:





Dimensions in mm.

Res-Ingenium

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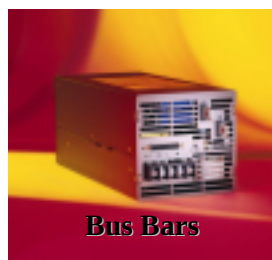
Non-Plug Single Phase PFC Universal Input Isolated Front End (IFE)

MODEL	PM3326B-6	PM3327B-6	PM3328B-6	PM3327B-5	PM3328B-5	PM3329B-5	PM33210B-5	PM33211B-5
POWER	1000W	1200W ①	1500W ②	1200W	1500W	2000W	2500W	3000W
INPUT	90 to 264VAC			180 to 264VAC				
OUTPUTS	DC	OUTPUT	CURRENT	DC	OUTPUT	CURRENT	DC	CURRENT
48V	21A	25A	31A	25A	31A	42A	52A	63A
32V	31A	37A	47A	37A	47A	62A	78A	94A
28V	36A	43A	53A	43A	53A	71A	89A	107A
26V	38A	46A	58A	46A	58A	77A	96A	115A
24V	42A	50A	63A	50A	63A	83A	104A	125A
12V	83A	100A	125A	100A	125A	167A	208A	250A



Terminal Block

DIMENSIONS: 5" x 5" x 11.25"
(127mm x 127mm x 286mm).
Exclusive of I/O Connectors.
WEIGHT: 10 lbs.
MOUNTING: Mounting holes for 8-32 screws included on the bottom and on one side.
I/O CONNECTORS: DC Output:
DC Terminal Block with 6-32 screws.
AC Input: Barrier strip with 6-32 screws. DB25 connector for options.



Bus Bars

DIMENSIONS: 5" x 5" x 11.25"
(127mm x 127mm x 286mm).
Exclusive of I/O Connectors.
WEIGHT: 10 lbs.
MOUNTING: Mounting holes for 8-32 screws included on the bottom and on one side.
I/O CONNECTORS:
DC Output: DC Bus Bars.
AC Input: Barrier strip with 8-32 screws. DB25 connector for options.

Models: PM3326B, PM3327B, PM3328B and PM3329B

① Derated to 1050W @ 90VAC. ② Derated to 1440W @ 90VAC.

Models: PM33210B and PM33211B

FEATURES

- Power Factor Corrected (> 0.99)
- 0°C to +50°C at Full Load
- Output Fully Floating
- Overcurrent Protection
- Overvoltage Protection
- Remote Sense
- Overtemperature Protection
- Self-contained Forced Air Cooling

SPECIFICATIONS

INPUT

RANGE: 90 to 264 VAC or 180 to 264 VAC, Single Phase.

FREQUENCY: 47 to 63 Hz.

POWER FACTOR: > 0.99 @ Full Load.

HARMONIC CURRENT: < 5%.

OUTPUT

ADJUSTMENT RANGE: +5%/-10% of nominal output voltage.

POLARITY: Output is isolated. It may be referenced plus/minus as required.

REMOTE SENSING: Compensates for up to 0.5V total loop drop in the output line.

STATIC REGULATION:

Line: ±0.25% over full line range.

Load: ±0.25% zero load to full load.

VOLTAGE STABILITY: ±0.1% for 24-hour period after 30-minute warm up.

TEMP COEFFICIENT: ±0.02%/°C from 0°C to +50°C.

P-P RIPPLE AND NOISE:

1% (20 Hz to 50 MHz Bandwidth).

MINIMUM LOAD: Not Required.

TURN ON DELAY: 1 sec. max from application of AC line.

OVERVOLTAGE PROTECTION: 125% ±5% of nominal. OVP shutdown is latched until the input line is removed for 5 secs and then reapplied. OVP sensing is done at the output terminals.

OVERCURRENT PROTECTION: Current Limit Point: 105% to 115% of full load.

ENVIRONMENTAL

OVERTEMPERATURE PROTECTION:

Automatically shuts down and latches the unit in the event of an overtemperature condition. After cool down, power must be recycled to restart unit.

AUDIBLE NOISE: 63dBA max at 1 meter. 70dBA for high speed fans.

DMTBF: Over 500,000 hours.

TEMPERATURE: Operating: 0°C to +50°C at full load. Storage: -55°C to +85°C.

HUMIDITY: 20% to 95% non-condensing.

ALTITUDE: Operating: 5,000 feet.

Derates to 85% at 10,000 feet.

Non-Operating: To 30,000 feet.

VIBRATION: Operating: From 5 to 27 Hz, 0.02 in double amplitude; from 27 Hz to 500 Hz, 0.75G, 3 axes, 3 min per octave sweep, dwell 15 min at resonance. Non-operating: From 5 to 17 Hz, 0.10 in double amplitude, from 17 to 500 Hz, 1.5G peak; 3 axes, 5 min per octave sweep; dwell 15 min at resonance.

SHOCK: Operating: 5G, half sine, 11msec, 3 axes. Non-Operating: 15G, half sine, 11msec, 3 axes.

COOLING: Forced air, internal fan. Airflow exits at connector end.

EMI: Designed to meet Conducted and Radiated: EN55022 Level A.

SAFETY: Designed to meet UL1950, CSA22.2 No. 950, and TUV to EN60950.

TYPICAL OPTIONS

(Complete Option List Available)

(-1C) AC POWER FAIL: Upon loss of AC line, signal goes from low to high before loss of output regulation.

(-2T) LOGIC INHIBIT: Less than 0.5 volts will inhibit the supply. Two volts or more or an open circuit will enable the supply. Logic inhibit return should be connected to negative output.

(-6B) CURRENT SHARING: Allows two or more similar power supply main outputs to load share using a single wire.

(-8UV) UNDERVOLTAGE DETECT: Signal pulls low when output drops more than 15% ±5% of the nominal. There is no upper trip point. Sensing occurs at the output terminals instead of the remote sense leads. High good (LED on) and Low bad (LED off).

(-20C) ISOLATION DIODE: Built-in Oring diodes in the positive output line to prevent a failed power supply from affecting the bus.

(-33) CURRENT MONITOR: The current monitor signal is referenced to the negative output. It is accurate to within +/- 10%, from 10% to 100% load. The analog signal 0V to 5V is proportional to the load when increased from no load to maximum load.

NOTE: The option signals (-1C) and (-2T) are floating and referenced to Logic Return. Logic Return should be connected by the customer to the system common.

SPECIAL OPTION

Intelligent Power Supply



- Built-in microchip controls all power supply & battery parameters, plus stores data on history, operating conditions & address.
- Allows user to program system functions & alarms.
- Permits either local monitoring (via RS485 bus) or remote monitoring (via modem).

Cat IFE, 1kW to 3kW, Non-Plug, 11/8/00