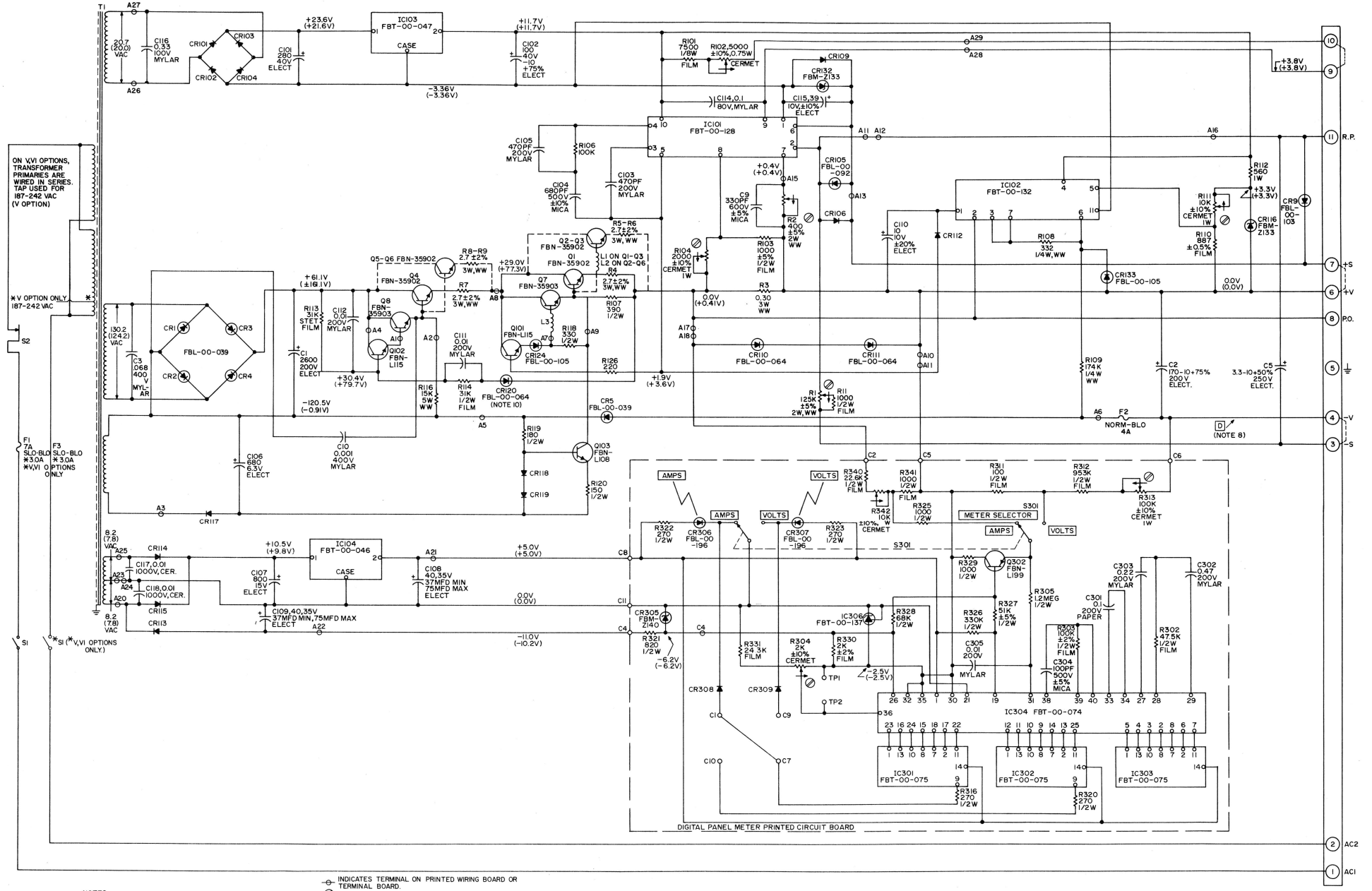
Schematics for

Lambda power supplies

LQ530
LQ531
LQ532
LQ533
LQ534



NOTES

1. RESISTORS ARE 1/4W COMP. WITH VALUES IN OHMS UNLESS OTHERWISE NOTED.
2. CAPACITOR VALUES ARE IN MICROFARADS UNLESS OTHERWISE NOTED.
3. RESISTOR TOLERANCES: COMP ±10%, FILM ±1%, WIREWOUND ±5% UNLESS OTHERWISE NOTED.
4. CAPACITOR TOLERANCES: ELECTROLYTIC -10+100%, CERAMIC ±20%, MYLAR ±10% UNLESS OTHERWISE NOTED.
5. SYMBOLS:
   - ▭ INDICATES ACTUAL UNIT MARKING
   - ↓ INDICATES CLOCKWISE ROTATION OF SHAFT
   - * SEE INSTRUCTION MANUAL.
   - ⊣ LAMBDA PART NO. FBL-00-030; USE IN 4002 DIODE FOR REPLACEMENT UNLESS OTHERWISE NOTED.
   - ⊸ INDICATES TERMINAL ON PRINTED WIRING BOARD OR TERMINAL BOARD.
   - ⊘ INDICATES ADJUSTMENT OR CALIBRATION CONTROL.
6. DESIGNATIONS ARE LAMBDA PART NUMBERS.
7. SEE TABLE I FOR COMPONENT VALUES.
8. SEE TABLE I FOR VOLTAGE VALUES.
9. CONDITIONS FOR CIRCUIT POINT MEASUREMENTS CV AND CC.
   INPUT: 115VAC, 60Hz.
   INDICATED VOLTAGES ARE TYPICAL VALUES AND ARE DC UNLESS OTHERWISE NOTED.
   DC MEASUREMENTS TAKEN WITH 20,000 OHMS/VOLT VOLTMETER BETWEEN +S (TERM 7) AND INDICATED POINTS UNLESS NOTED OTHERWISE.
   A. CONSTANT VOLTAGE.
      READ NOS. NOT IN PARENTHESIS.
      OUTPUT: MAX RATED VOLTAGE, ZERO CURRENT.
   B. CONSTANT CURRENT
      READ NOS. IN PARENTHESIS.
      OUTPUT: 0 VOLTS, MAX RATED CURRENT (SHORT CIRCUIT).
10. CR120 ONLY USED ON UNITS WITH SERIAL NO. PREFIX K.

FOR WIRING OF POWER SUPPLY TO LOAD REFER TO SUPPLY-TO-LOAD WIRING DIAGRAMS.

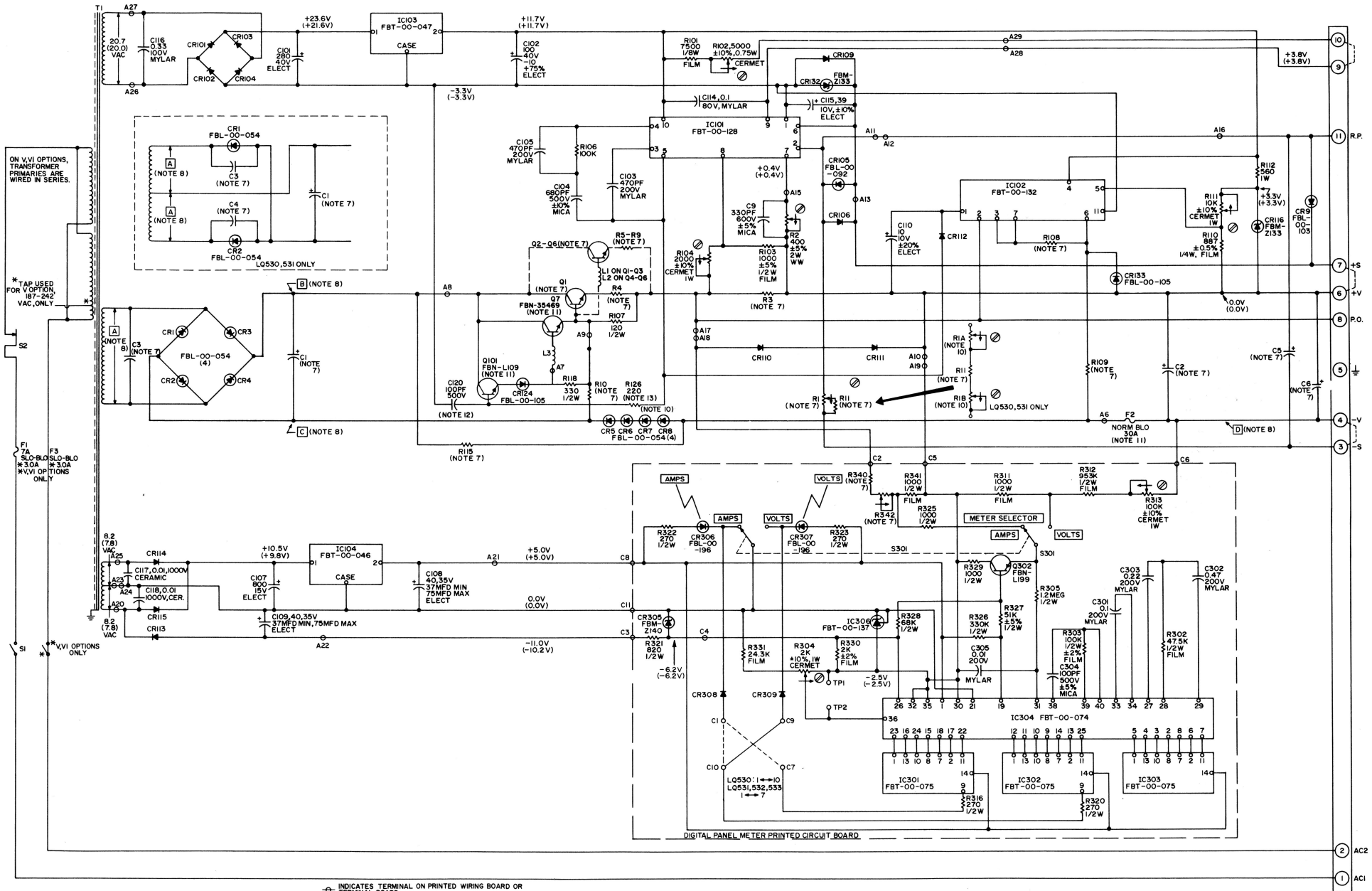
DOTTED CONNECTIONS SHOWN ON TB1 INDICATE JUMPERS IN PLACE FOR LOCAL SENSING CONNECTION.

THIS SCHEMATIC APPLIES TO UNITS BEARING SERIAL NO. PREFIXES K & L.

SCHEMATIC DIAGRAM
REGULATED POWER SUPPLY

LQ534

LAMBDA
ELECTRONICS
MELVILLE, NEW YORK
DIVISION OF Veeco INSTRUMENTS INC.



NOTES

1. RESISTORS ARE 1/4W COMP. WITH VALUES IN OHMS UNLESS OTHERWISE NOTED.
2. CAPACITOR VALUES ARE IN MICROFARADS UNLESS OTHERWISE NOTED.
3. RESISTOR TOLERANCES: COMP ±10%, FILM ±1%, WIREWOUND ±5% UNLESS OTHERWISE NOTED.
4. CAPACITOR TOLERANCES: ELECTROLYTIC -10+100%, CERAMIC ±20%, MYLAR ±10% UNLESS OTHERWISE NOTED.
5. SYMBOLS:
   - ▭ INDICATES ACTUAL UNIT MARKING
   - ↓ INDICATES CLOCKWISE ROTATION OF SHAFT
   - * SEE INSTRUCTION MANUAL
   - LAMBDA PART NO. FBL-00-030 USE IN 4002 DIODE FOR PCB AGREEMENT IN ECO (UNLESS NOTED)
   - -o- INDICATES TERMINAL ON PRINTED WIRING BOARD OR TERMINAL BOARD.
   - ⊘ INDICATES ADJUSTMENT OR CALIBRATION CONTROL.
6. DESIGNATIONS ARE LAMBDA PART NUMBERS.
7. SEE TABLE I FOR COMPONENT VALUES.
8. SEE TABLE I FOR VOLTAGE VALUES.
9. CONDITIONS FOR CIRCUIT POINT MEASUREMENTS, CV AND CC.
   INPUT: 115VAC, 60Hz;
   INDICATED VOLTAGES ARE TYPICAL VALUES AND ARE DC UNLESS OTHERWISE NOTED. DC MEASUREMENTS TAKEN WITH 20,000 OHMS/VOLT VOLTMETER BETWEEN +S (TERM 7) AND INDICATED POINTS UNLESS NOTED OTHERWISE.
   A. CONSTANT VOLTAGE
      READ NOS. NOT IN PARENTHESIS
      OUTPUT: MAX. RATED VOLTAGE, ZERO CURRENT.
   B. CONSTANT CURRENT
      READ NOS. IN PARENTHESIS
      OUTPUT: 0 VOLTS, MAX. RATED CURRENT (SHORT CIRCUIT).
10. CR6, CR7 ONLY USED ON LQ532 AND LQ531; CR8 ONLY USED ON LQ533; R1A, R1B IS 9K+1K ON LQ530 AND IS 19K+1K ON LQ531.
11. Q101 IS FBN-L108 ON LQ532 AND LQ533; Q7 IS FBN-36488 ON LQ531 AND IS FBN-35903 ON LQ532; F2 IS 20A ON LQ531, 10A ON LQ532 AND 7A ON LQ533.
12. C120 ONLY USED ON LQ531 UNITS.
13. R126 IS 1K OHM ON LQ531 UNITS.

FOR WIRING OF POWER SUPPLY TO LOAD REFER TO SUPPLY-TO-LOAD WIRING DIAGRAMS.

DOTTED CONNECTIONS SHOWN ON TB1 INDICATE JUMPERS IN PLACE FOR LOCAL SENSING CONNECTION.

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SCHEMATIC DIAGRAM
REGULATED POWER SUPPLY

LQ530, LQ531
LQ532, LQ533

LAMBDA
ELECTRONICS
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TABLE I
SCHEMATIC DATA REFERENCES
MODELS LQ530, LQ531, LQ532, LQ533

Model	Schematic Voltage Measurements				Schematic Components						
					C1	C2	C3	C4	C5	C6	Q1-Q6
	A (VAC)	B (VDC)	C (VDC)	D (VDC)	-10 +100% ELECT	-10 +75% ELECT	±10% MYLAR	±10% MYLAR	-10 +50% ELECT	±10% ELECT	*FBN-
LQ530	18.6 (17.6)	+15.4 (+20.0)	-10.58 (-1.48)	-10.0	32,000 mf 30vdc	1,500 mf -10 +100% 30vdc	0.22 mf 80vdc	0.22 mf 200vdc	12.0 mf -10 +100% 50 vdc	3.9 mf 50vdc	36220
LQ531	28.9 (27.5)	+19.2 (+33.0)	-20.6 (-1.1)	-20.0	16,000 mf 50vdc	860 mf 50vdc	0.22 mf 80vdc	0.22 mf 200vdc	12.0 mf -10 +100% 100 vdc	NOT USED	36220
LQ532	49.2 (46.9)	+26.2 (+56.6)	-41.65 (-2.7)	-40.0	9,700 mf 75vdc	500 mf 75vdc	0.22 mf 80vdc	NOT USED	5.6 mf 250vdc	NOT USED	36487
LQ533	67.8 (64.6)	+32.1 (+79.5)	-62.2 (-3.6)	-60.0	4,800 mf -10 +75% 110vdc	320 mf 110vdc	0.068 mf 400vdc	NOT USED	5.6 mf 250vdc	NOT USED	35902
LQ534	130.2 (124.2)	+61.1 (+161.6)	-120.5 (-0.91)	-120.0	2,600 mf -10 +75% 200vdc	170 mf 200vdc	0.068 mf 400vdc	NOT USED	3.3 mf 250vdc	NOT USED	35902

*LAMBDA PART NUMBER

TABLE I (Cont)

Model	Schematic Components									
	R1	R3	R4-R9	R10	R11	R108	R109	R115	R340	R342
	-0 +10% 2W WW	±5% WW	±3% 3W WW	±5% 15W WW	±1% ½W FILM	±1% ¼W FILM	±1% ½W FILM	±10% ½W COMP	±1% ½W FILM	±10% 1W CERAMIC
LQ530	10,000	0.45 15W	0.43 ±5% 7W	135	82 ±5%	1050 ±0.5%	40.2K	1.8K	40.2K	10K
LQ531	20,000 ±10%	0.070 15W	0.74 ±5% 5W	135	182	562	40.2K	4.3K ±5%	JUMPER	10K
LQ532	40,000	0.12 10W	1.36	300	390 ±2%	280	40.2K	13K ±5%	JUMPER	20K
LQ533	60,000	0.16 5W	2.0	750	562	332	95.3K	27K	JUMPER	20K
LQ534	120,000	0.3 3W	2.7	NOT USED	1180	332	174K ¼W	NOT USED	22.6K ¼W	10K