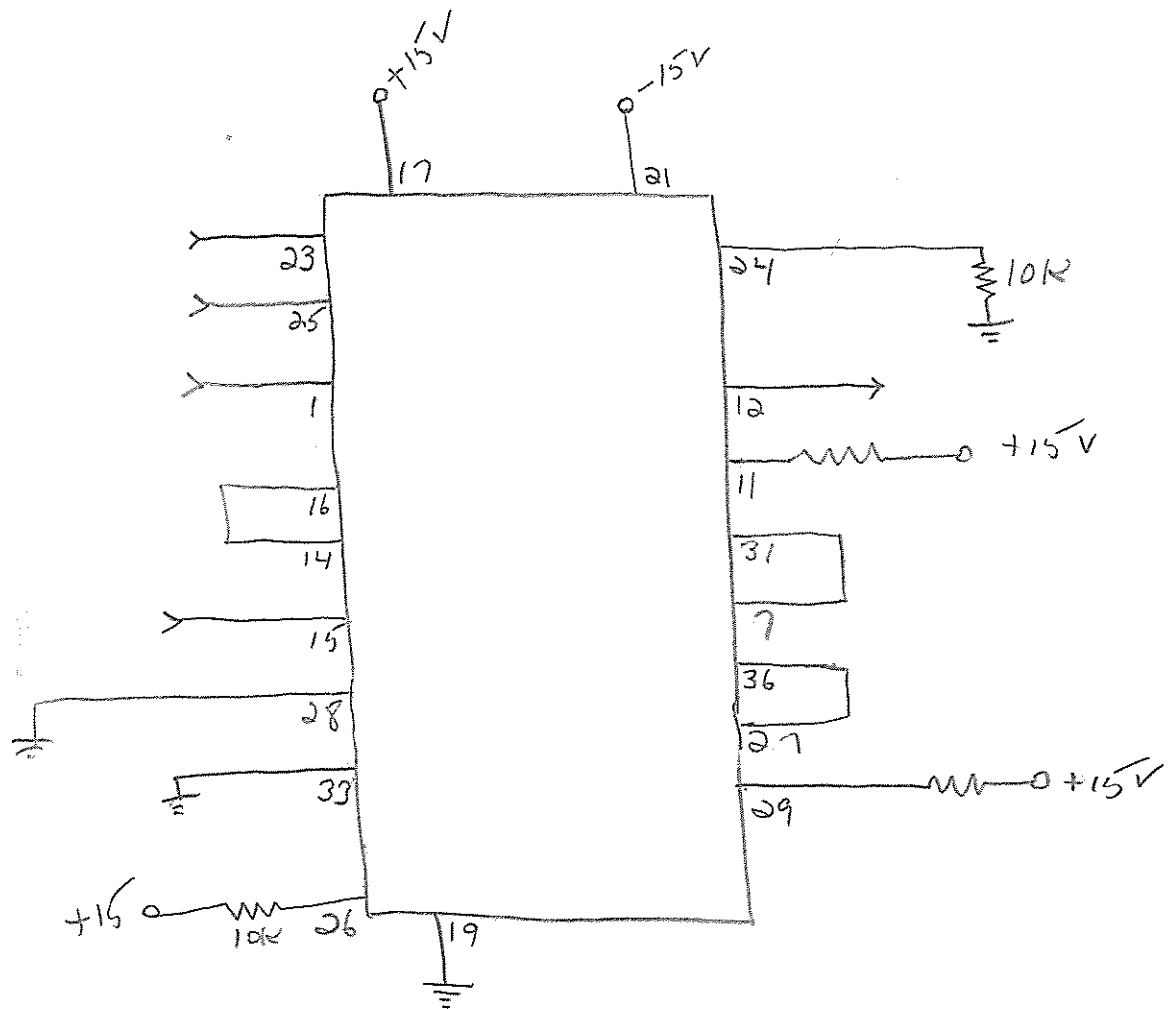4199J 51 G01

Test for 4199 J51 G01

- Ground pin 23. Turn R7 fully CW.
- Monitor TP7. It should stay at 0.V +- .1V while inputting +- 15V on pin 25.
- Connect pin 23 to +5v.
- Connect -1.V to pin 25
- TP7 should go to saturation (approx -13.5V). It may take up to 30 seconds. Pin 24 to .6V more pos than TP7.   (-13.6)
- Apply +1.V to pin 25.
- After about 30 seconds TP7 should read approx .5V .445   DELAY B4 VOLTS STARTS TO RAISE
- Apply -1.0V to pin 25 and monitor TP8
- Adjust R7 for +5,V on TP8. Remove volts on pins 25 & 23
- SP Error circuit tested
- Apply +10.0 volts to pin 1.
- Adjust R25 for -10.0 volts on pin 12.
- Verify TP5 reads same voltage as pin 12.
- Remove voltage on pin 1
- Apply +.500 volts to pin 8

- Connect pin 5 to ground
- Turn R70 fully CCW
- TP3 should read -11.0 volts +- 1,V
- move +.500 volts from pin 8 to pin 2
- Adjust R12 for -10.00 volts on TP3
- Connect pin 6 to junction of R71 & wiper of R70
- Adjust R70 cw for -5.00 volts on TP3
- Reverse polarity of voltage on pin 2 from +.500V to -.500V

- Verify +5 volts on TP3 (+- .3v) 4.96
- Remove connection between Pin 6 & R21
- TP3 should read + 10.0 volts (+- .3 volts) 9.94
- Input -5.00 volts to pin 5
- Adjust R21 for 3.0 volts on pos side of C3 (will take about 2 minutes to settle)
- Verify + 4.0 volts (+- .2v) on TP4
- Adjust R18 for + 1.00 volt on TP3

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- Remove connection on pin 5 & 2 to make supplies available (left side on schematic tested)
- Apply + 7.5V to pin 15
- Turn R37 fully CW
- Verify + 15V on pin 11
- Turn R37 until pin 11 goes to approx . 7V
- Turn R27 fully CCW
- Verify approx -13V on pin 31
- Adjust R37 clockwise until pin 31 goes to + 3.V
- Adjust R27 for 0.00V on pin 31
- Turn R47, R52, R55, R57 fully CW
- Input + 7.5V to pin 3
- Verify voltage on pin 31 between -13V & -15V -13.3
- Move + 7.5 volts from pin 3 to pin 4.
- Verify -10.Volts on pin 31
- Move + 7.5 volts from pin 4 to pin 38
- Adjust R47 for -9.00 volts on pin 31
- Move + 7.5 volts from pin 38 to pin 39

- Adjust R52 for -9.00 Volts on pin 31
- Move +7.5V from pin 39 to pin 40
- Adjust R55 for -6.00 Volts on pin 31
- Move +7.5V from pin 40 to pin 41
- Adjust R57 for -4.00V on pin 31
- Adjust R43 for -3.00 Volts on pin 32
- Adjust R50 for -7.5V on pin 36
- TP11 should read between -13V & -15V
- Pin 30 should read +4.0 Volts
- Adjust R44 for -4.0 volts on pin 32
- Verify +15V on pin 29
- Reverse connections on pins 28 & 27 (27 connected to ground & 28 connected to pin 36)
- Verify < +1.V on pin 29   0.68v   0.62v
- Verify +.6V (diode drop) on pin 36 0.59   .58