HIGH SPEED DRIVERS (continued)

D111 (Single channel driver) — Current Source Output

This single channel high speed driver has available test points for independently adjusting both the positive and negative output currents.

The GMC D111 high speed driver contains two significant improvements over the existing industry standards: Hermetic Packaging, and significantly faster switching speeds.

FEATURES

- Reverse Voltage Protection
- True current source and sink outputs
- When using inverting input, connect bias pin 5 to non-inverting input pin 6
- When using non-inverting input, connect bias pin 5 to inverting input pin 4
- Externally adjustable positive and negative currents
- For positive currents between +15 ma and +30 ma connect external resistor R1 between pin 8 (TP+) and +5V

$$R1 = \frac{2.7}{I^* - 0.015}$$

- For +30 ma output connect pin 8 (TP+) to pin 9
- For positive output currents greater than +30 ma connect pin 8 to pin 9 and add external resistor R2 between pin 8 and +5V

$$R2 = \frac{2.7}{I^* - 0.030}$$

- To increase negative output current connect external resistor R3 between pin 14 (TP−) and VEE

$$R3 = \frac{5.3}{I^* - 0.015}$$

- Package-14 lead, Reference Figure A

*I is desired output current in amperes.

PIN FUNCTIONS

1. VEE (−5V to −15V)
2. Output
3. Ground
4. Inverting input
5. Input bias
6. Non-Inverting input
7. VCC (+5V ±0.5V)
8. TP+
9. +30 ma
10. N/C
11. N/C
12. N/C
13. N/C
14. TP−

D211/D211B (Dual channel drivers) — Current Source Output

These drivers are electrically identical (exception: reverse voltage protection is not included) to the D111 except that two channels are packaged in the same volume. However, no current adjust test points are available.

The GMC D211 high speed driver contains two significant improvements over the existing industry standards: Hermetic Packaging and significantly faster switching speeds.

FEATURES

- True current source and sink outputs
- +15 ma positive output currents for D211
- +30 ma positive output current for D211B
- −15 ma negative output currents for both D211 and D211B
- 18 ns maximum switching speed (T_{OFF})
- 15 ns maximum switching speed (T_{ON})
- When using channel 1 inverting input (pin 4), connect bias (pin 5) to non-inverting input (pin 6)
- When using channel 2 inverting input (pin 11), connect bias (pin 10) to non-inverting input (pin 9)
- When using channel 1 non-inverting input (pin 6), connect bias (pin 5) to inverting input (pin 4)
- When using channel 2 non-inverting input (pin 9), connect bias (pin 10) to inverting input (pin 11)
- Package-14 lead. Reference Figure A

PIN FUNCTIONS

1. VEE (−5V to −15V)
2. Output 1
3. Ground
4. Inverting input 1
5. Input bias 1
6. Non-inverting input 1
7. VCC (+5V ±0.5V)
8. N/C
9. Non-inverting input 2
10. Input bias 2
11. Inverting input 2
12. N/C
13. Output 2
14. N/C

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