



* - This transistor is mounted directly atop one of the IRF640s in the output stage for strong thermal coupling with a short time constant. IRF MOSFETs do not have a negative tempo until they are at VERY high drain currents which would destroy the device in this application (I know from experience!). This amplified diode configuration has a strong negative tempo which means that thermal runaway is avoided but also that very large bias currents (3+ times steady state) can occur at startup when the amplifier is cold (not uncommon in a car installation).

The majority of this design is taken from the applications information for the Analog Devices SSM-2131 op-amp (previously made by PMI). This circuit can be found as Figure 6 on page 7-86 of the AD/PMI Analog Integrate Circuits Data Book Vol. #10 Copyright 1990.

- My changes of the design include:
- Using IRF640 and IRF9640 MOSFETs
 - Changing the MOSFET bias circuit to improve the thermal negative tempo
 - Reducing the gain from 24.0 to 10.0 to shift the noise floor in my overall system
 - Increasing the DC servo gain to speed offset settling at turn on

Anywhere from 1 to 3 MOSFETs can be used in parallel with this design without significant change in high frequency performance. I bias the MOSFETs to 100mA per pair.

Title		
Current Feedback Amplifier		
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