

Radio Frequency Interference By Demodulation Mechanisms Present Inbipolar Operational Amplifiers

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Summary

A model is proposed for the input-voltage/output-voltage characteristics of bipolar active loaded common-emitter and differential pair amplifiers. Using this model, closed-form expressions are derived for the harmonic and intermodulation products resulting from a multisinusoidal excitation. Using these expressions, the radio frequency interference (RFI) demodulation in bipolar operational amplifiers, using active loaded common-emitter and differential pair amplifiers can be predicted. The results show that the finite values of the early voltages in active loaded amplifiers play an important role in deciding the RFI demodulation performance of bipolar operational amplifiers

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