Structured Electronic Design
Principle of amplification
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Modulation of power transfer from power source to the load by the signal source
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Modulation mechanism found in some passive elements
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Modulation mechanism found in some passive elements

Trans-resistor with voltage supply source

Trans-resistor with current supply source
Principle of Amplification

Modulation of power transfer from power source to the load by the signal source

Modulation mechanism found in some passive elements
Design approach
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1. Find an operating mechanism that provides an available power gain > 1
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   a. Biased passive two-terminal devices:
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   Biased single-device (transistor) amplifier stage suffers from:
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