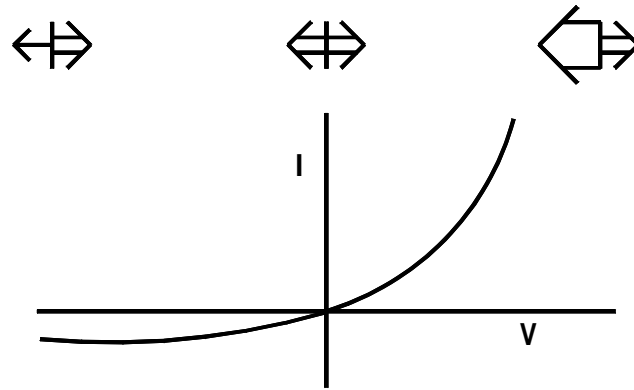
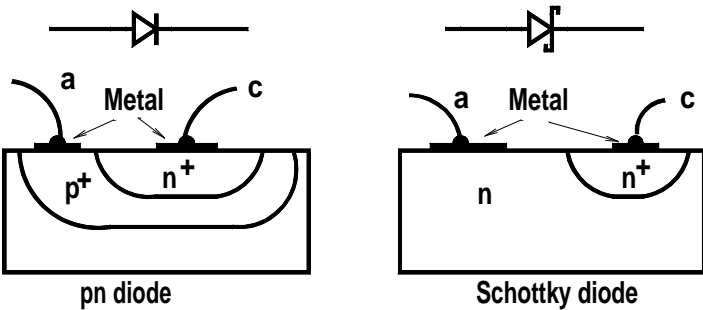


- Metal-semiconductor junction characteristic determined by work functions and semiconductor doping concentrations.
  - Schottky diode has a knee voltage of about 0.2 V and has a very fast response
  - A Schottky diode used with an npn transistor prevents minority carrier saturation of the transistor.
  - STTL circuits use Schottky transistors and operate at higher speeds than TTL circuits.
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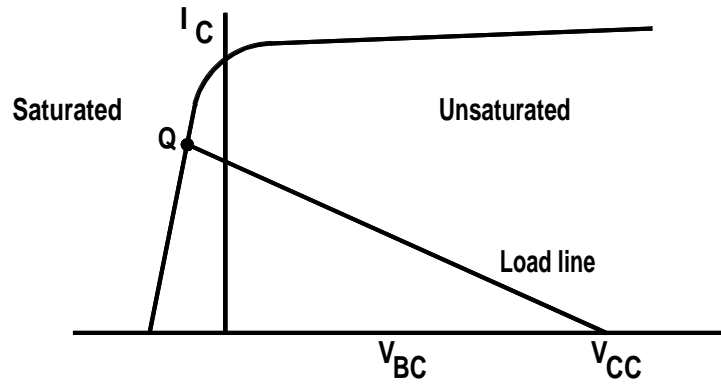
Schottky diode characteristic. Arrow thickness is proportional to majority carrier current in each direction.

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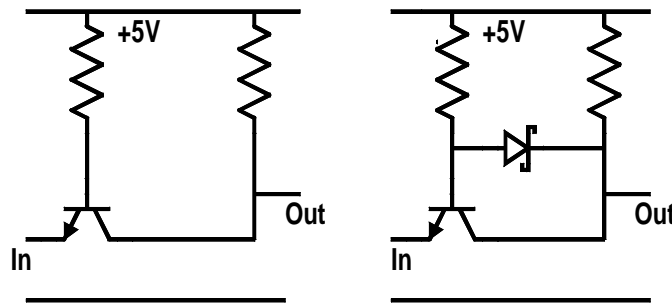


Schottky diode structure.

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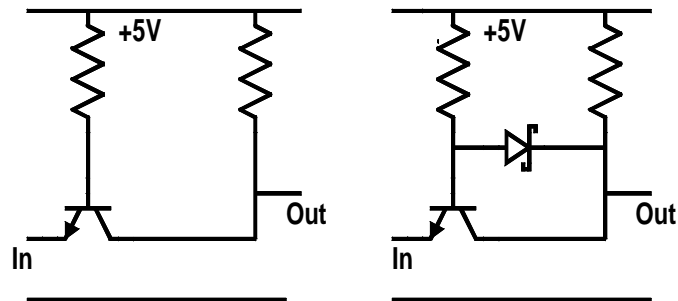


Saturation mechanism in npn transistor.

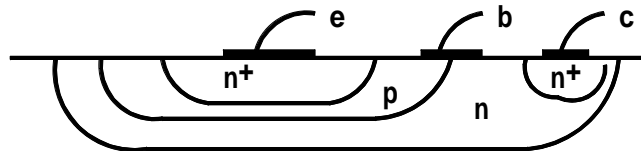


Schottky diode used to prevent saturation.

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Schottky diode used to prevent saturation.



Fabrication structure of Schottky transistor.

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