Structured Electronic Design
Principle of biasing

Principle of Biasing

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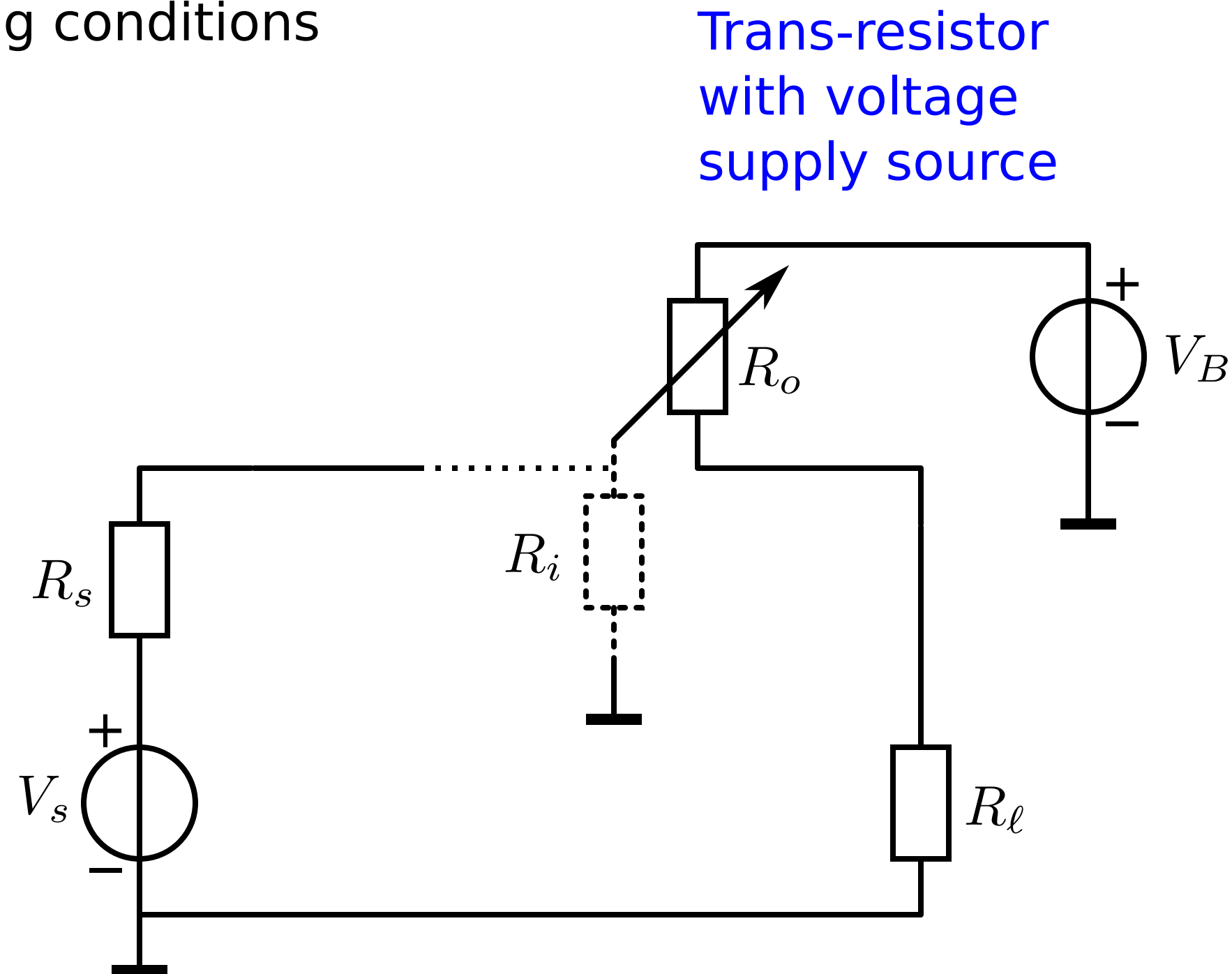Biasing:

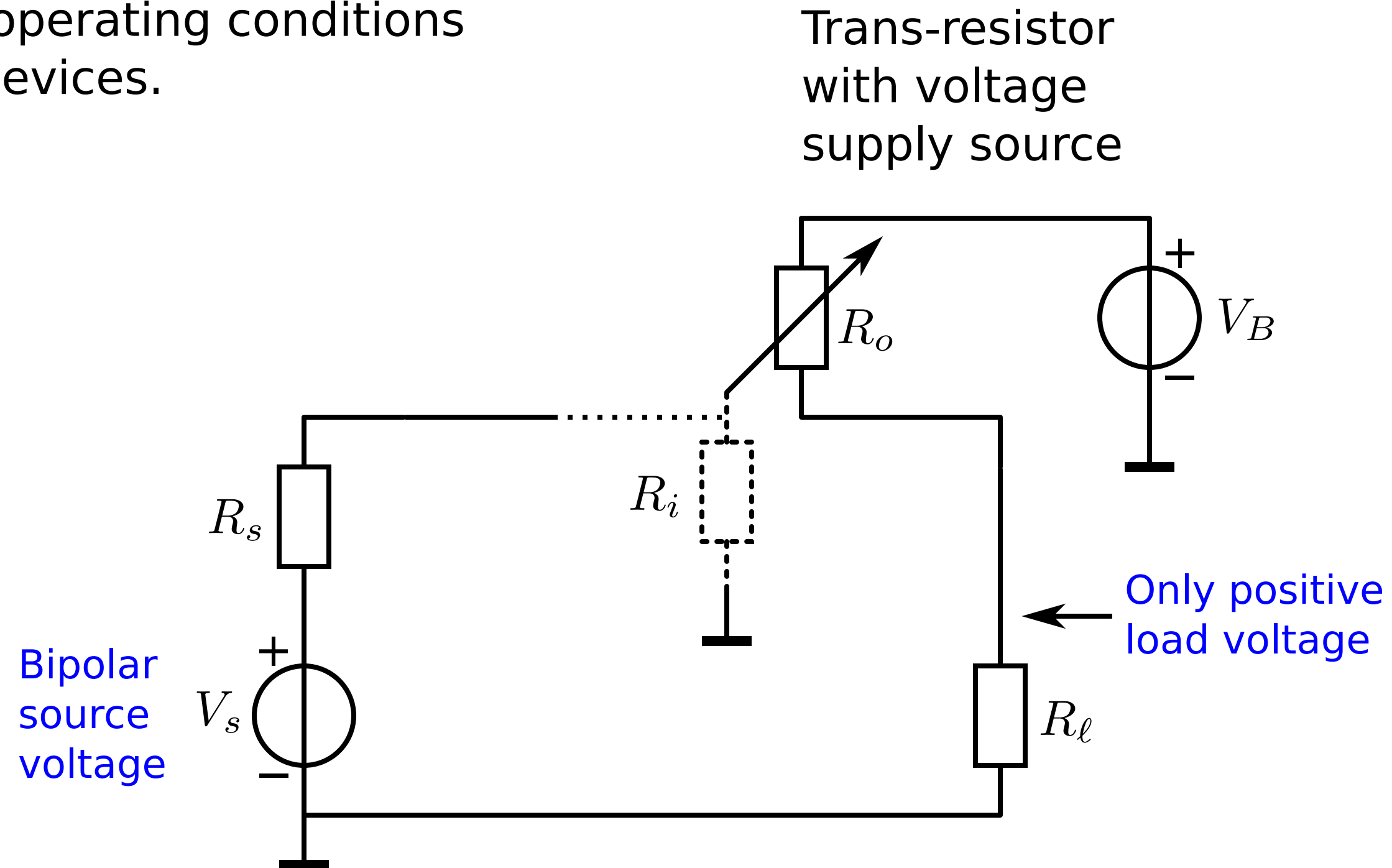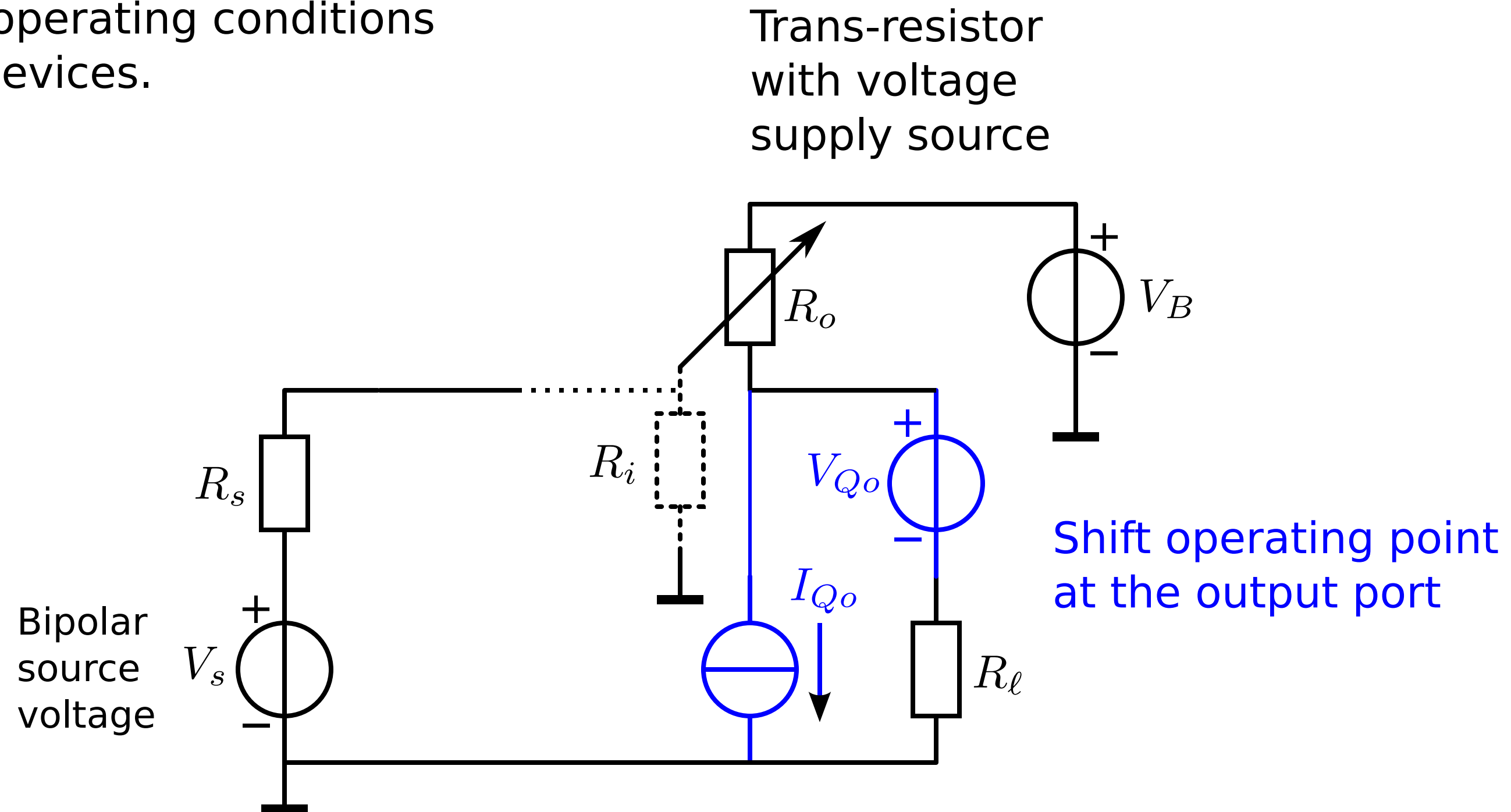# Principle of Biasing

Biasing:

Application of techniques for fixing
the electrical operating conditions
of electronic devices.

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Principle of Biasing

Biasing:
Application of techniques for fixing
the electrical operating conditions
of electronic devices.

Trans-resistor
with voltage
supply source

R_o

V_B

R_s

R_i

V_s

R_ℓ

Principle of Biasing

Biasing:
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of electronic devices.

Trans-resistor
with voltage
supply source

R_o

V_B

R_i

Only positive
load voltage

Bipolar
source
voltage

V_s

R_s

R_ℓ

Principle of Biasing

Biasing:
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of electronic devices.

Trans-resistor
with voltage
supply source

R_o

V_B

R_i

V_{Qo}

Shift operating point
at the output port

Bipolar
source
voltage

R_s

V_s

I_{Qo}

R_ℓ

Principle of Biasing

Biasing:
Application of techniques for fixing
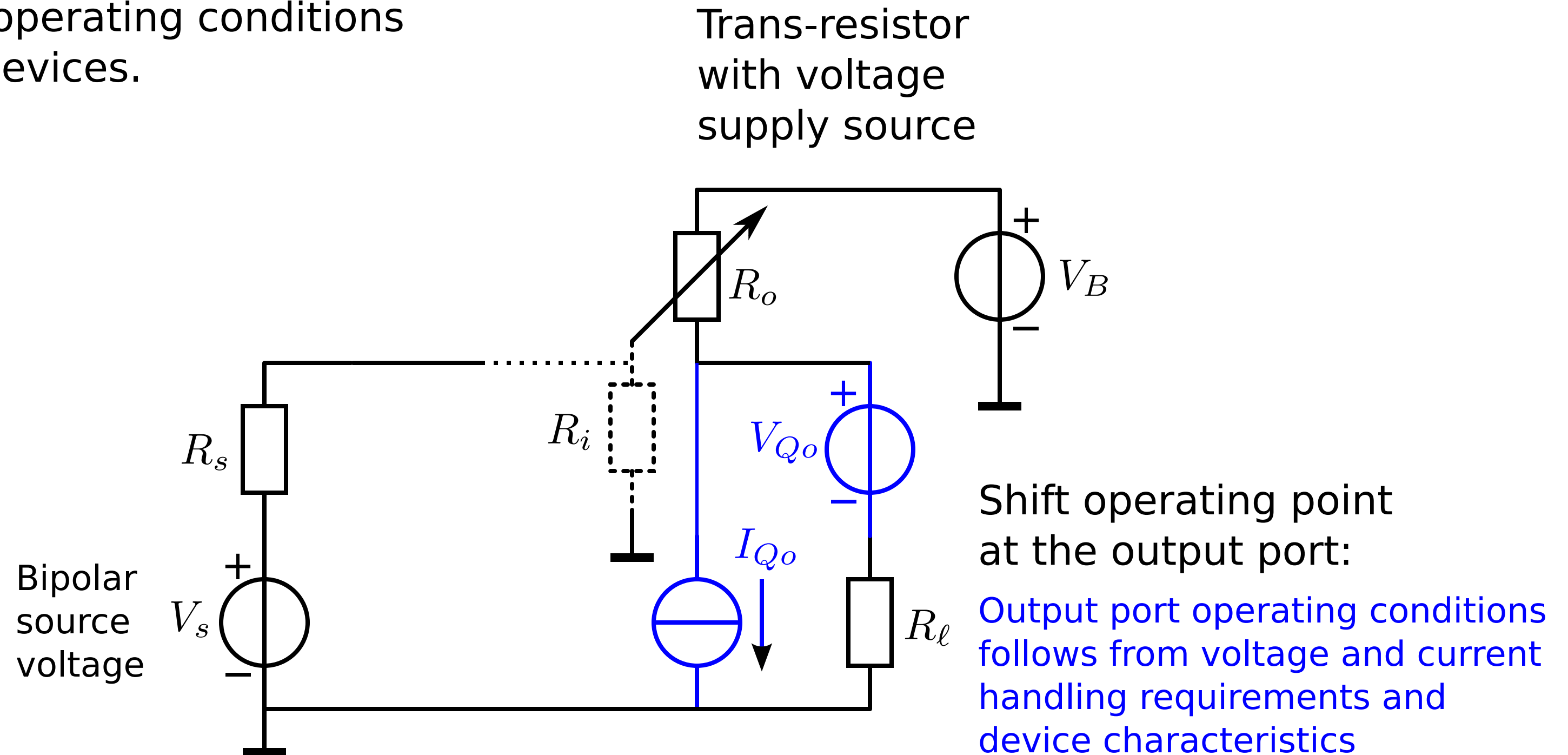the electrical operating conditions
of electronic devices.

Trans-resistor
with voltage
supply source

R_o

V_B

R_i

R_s

V_{Qo}

Bipolar
source
voltage

V_s

I_{Qo}

R_ℓ

Shift operating point
at the output port:

Output port operating conditions
follows from voltage and current
handling requirements and
device characteristics

Principle of Biasing

Biasing:
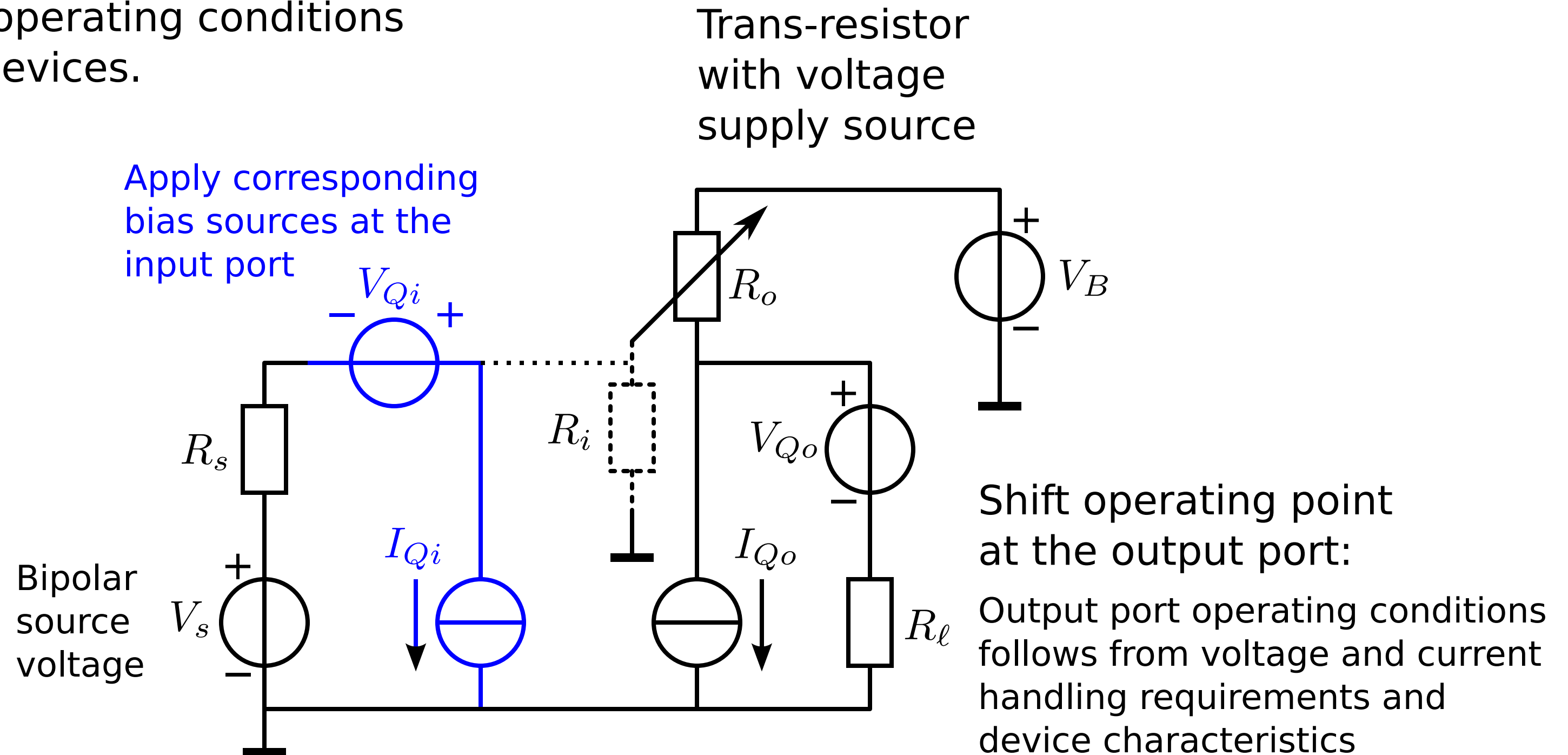Application of techniques for fixing the electrical operating conditions of electronic devices.

Trans-resistor with voltage supply source

Apply corresponding bias sources at the input port

Bipolar source voltage

Shift operating point at the output port:

Output port operating conditions follows from voltage and current handling requirements and device characteristics
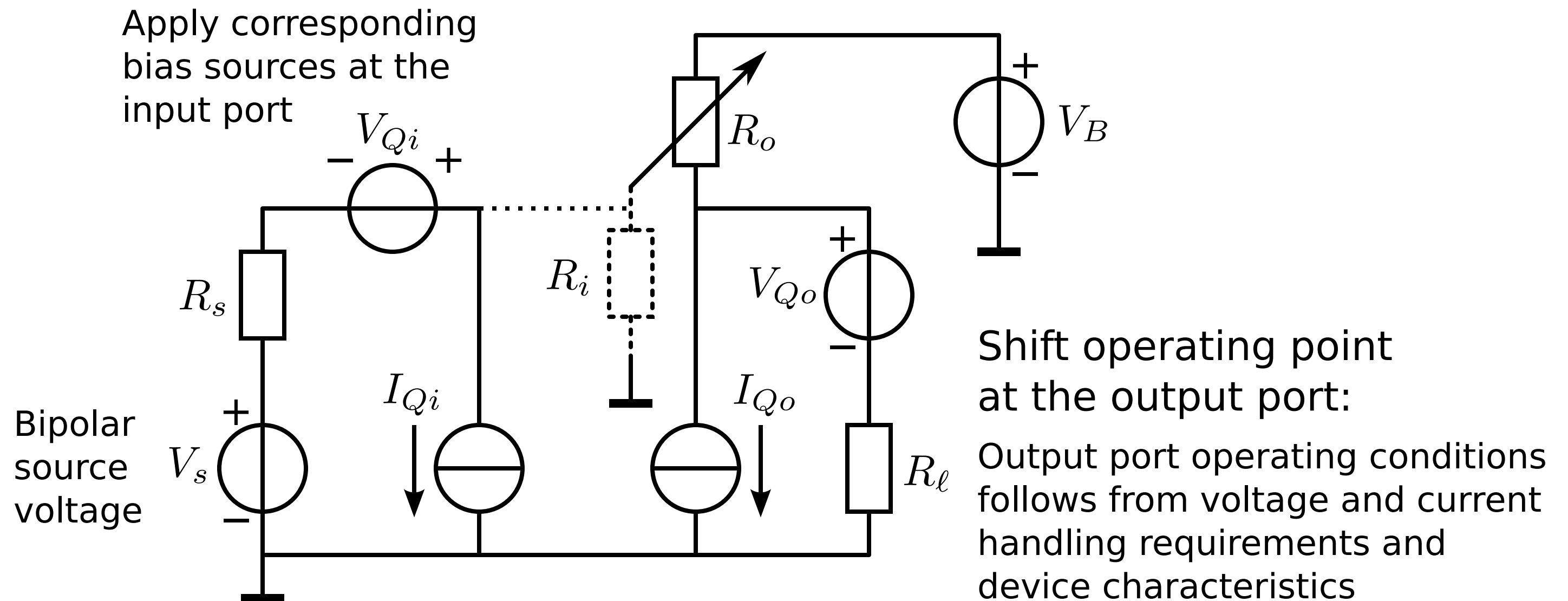
Principle of Biasing

Biasing:
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of electronic devices.

Biased trans-resistor

Apply corresponding
bias sources at the
input port

Bipolar
source
voltage

Shift operating point
at the output port:

Output port operating conditions
follows from voltage and current
handling requirements and
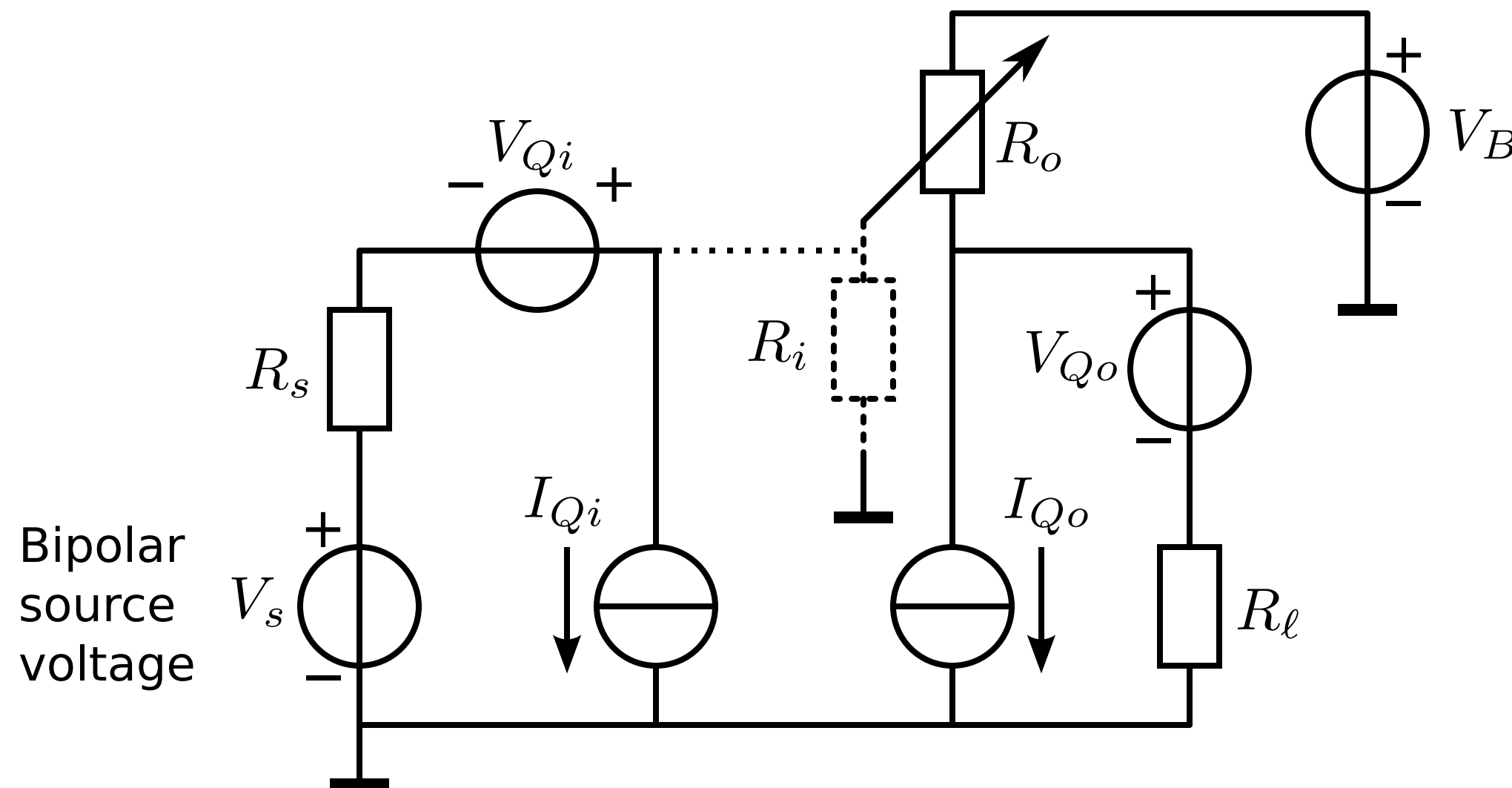device characteristics

Principle of Biasing

Biasing:
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Biased trans-resistor

Zero input corresponds with zero output

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Biased trans-resistor

Zero input corresponds with zero output