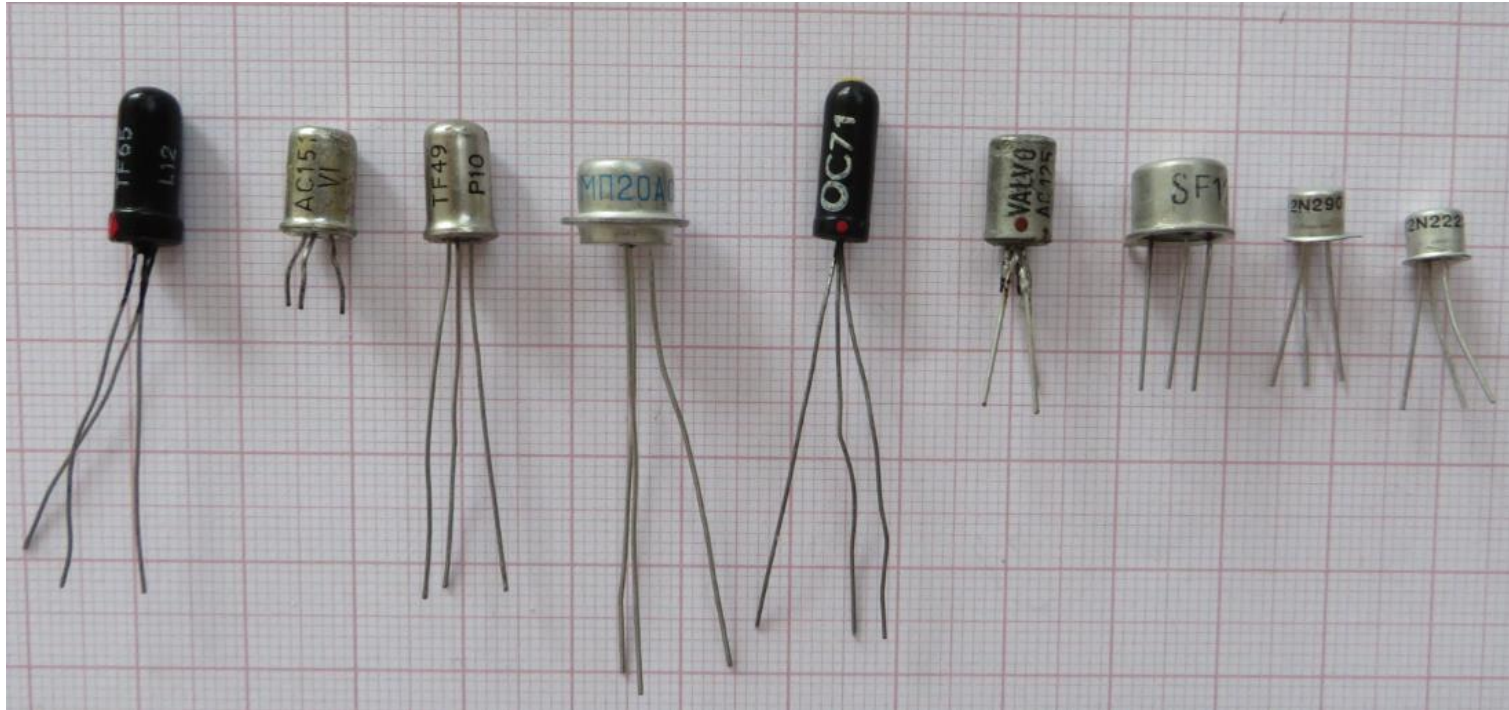


# Revue of Historic BJT Performances and Modelings



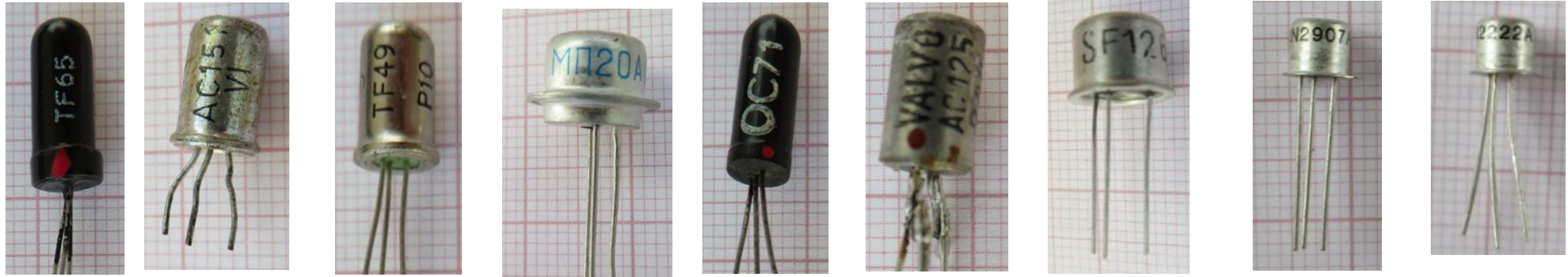
with special acknowledgements to J.Berkner

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# Revue of Historic BJT Performances and Modelings

time



|         |         |         |       |       |        |       |          |          |
|---------|---------|---------|-------|-------|--------|-------|----------|----------|
| 1962    | 1962    | 1962    |       | 1964  | 1970   | 1985  |          |          |
| Siemens | Siemens | Siemens | UdSSR | Valvo | Valvo  | HFO   | Motorola | Motorola |
| TF65    | AC151   | TF49    | MP20B | OC71  | AC125  | SF126 | 2N2907   | 2N2222   |
| pnp     | pnp     | pnp     | pnp   | pnp   | pnp    | nnp   | pnp      | nnp      |
| 1MHz    | 1.5MHz  | 9MHz    | 1MHz  |       | 1.7MHz | 60MHz | 200MHz   | 250MHz   |

Germanium



Silicon



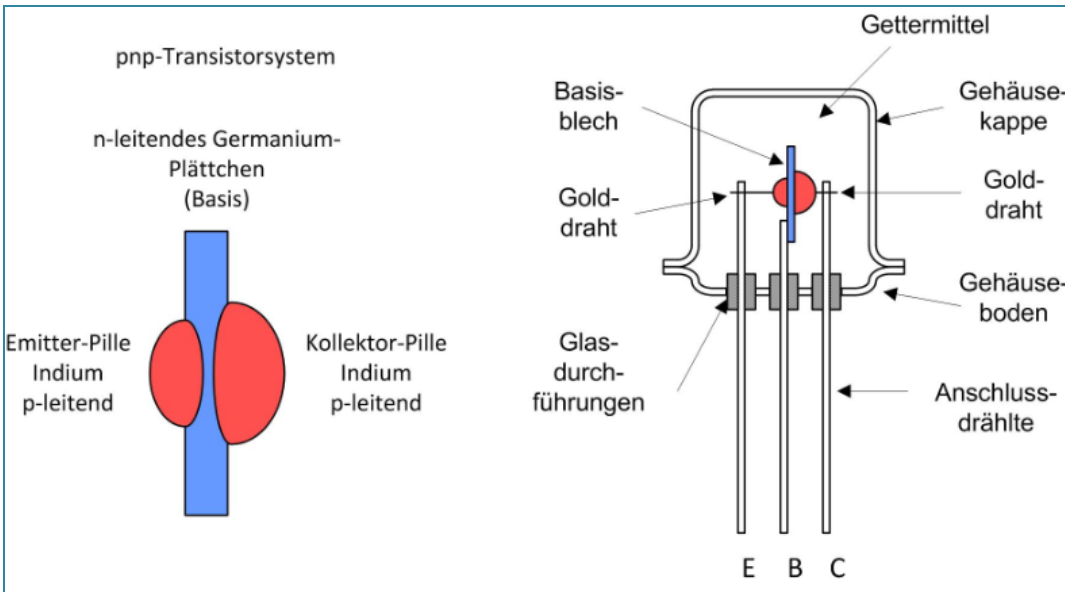
Alloy Transistors



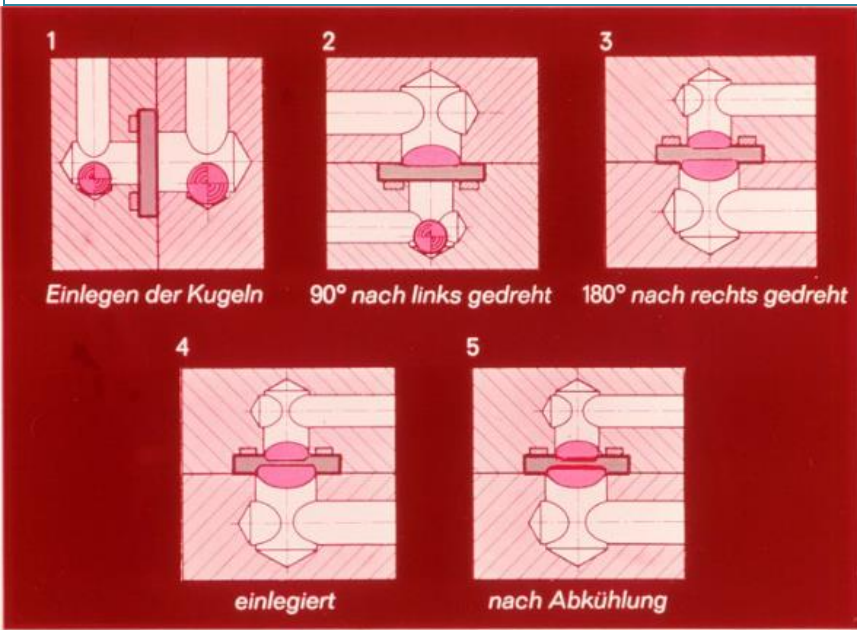
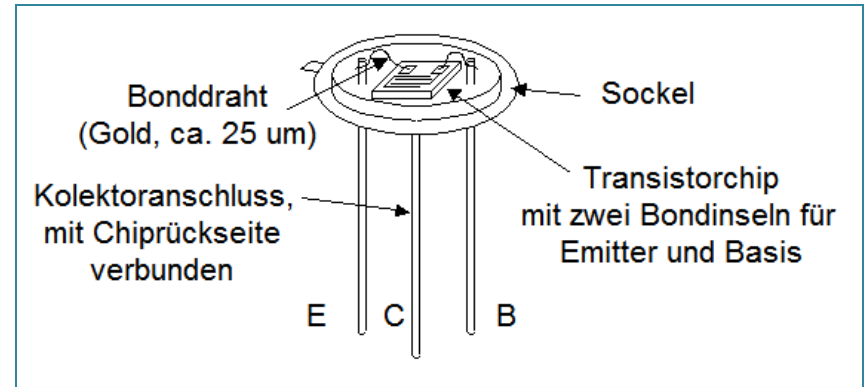
Epitaxy Planar Transistors



# Alloy Transistor



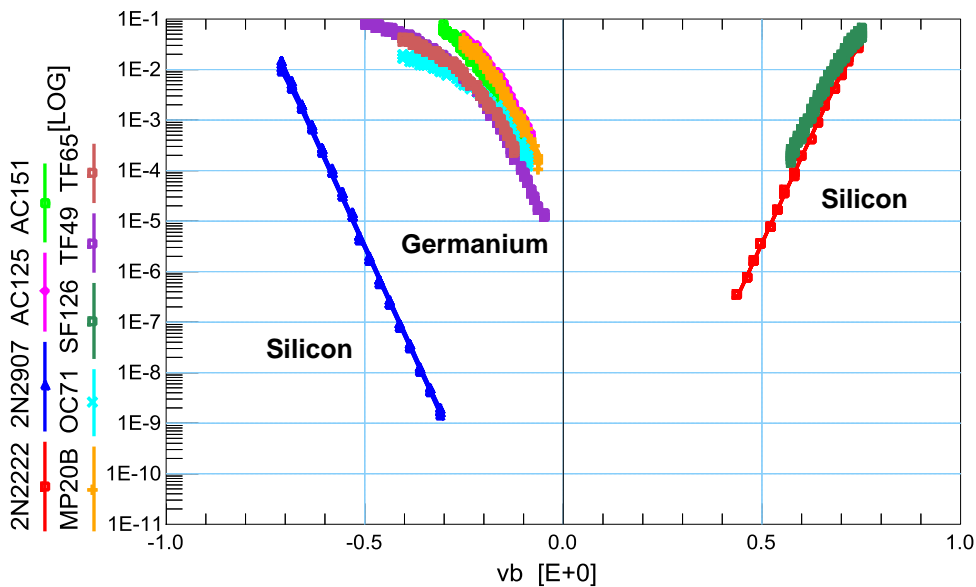
# Epitaxy Planar Transistor



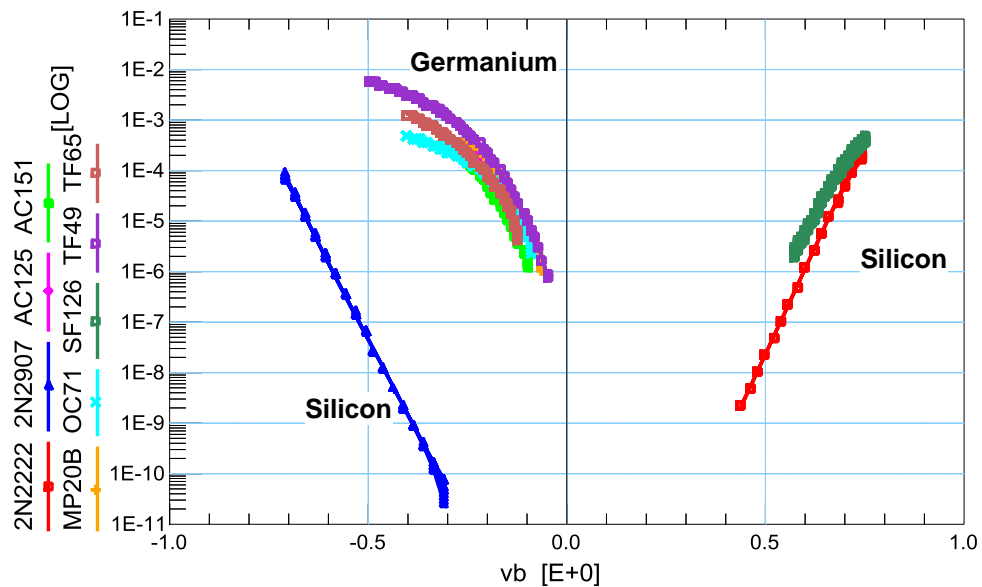
(C) J.Berkner

# DC Characteristics

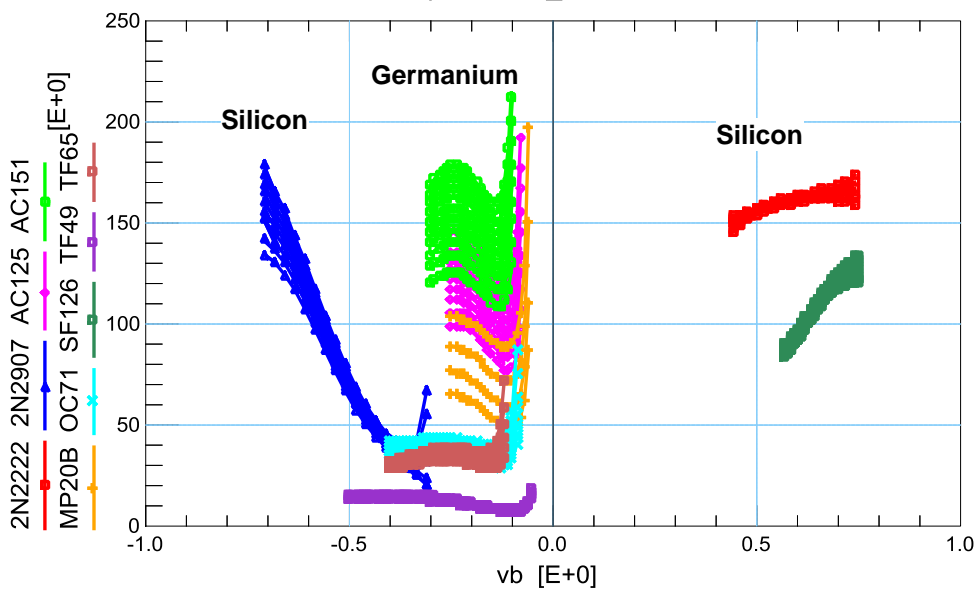
Compare Gummel Plots ic



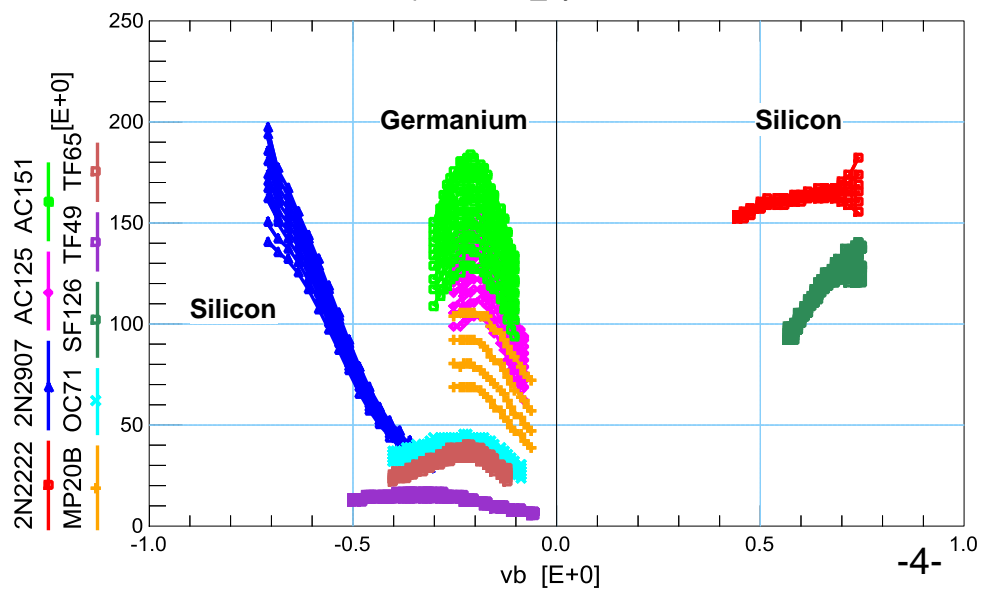
Compare Gummel Plots ib



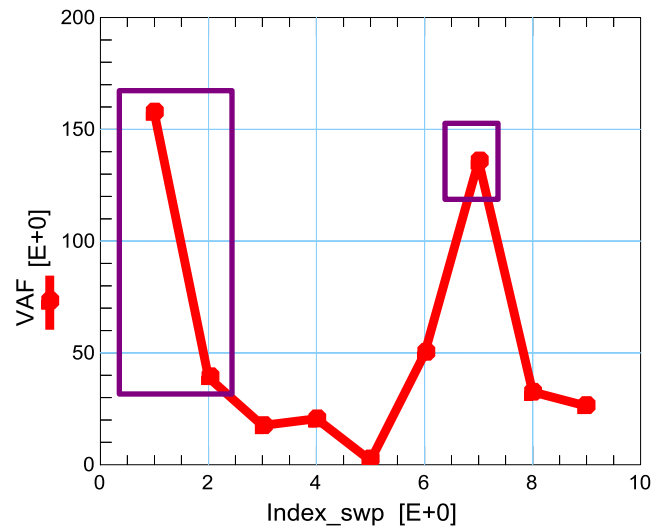
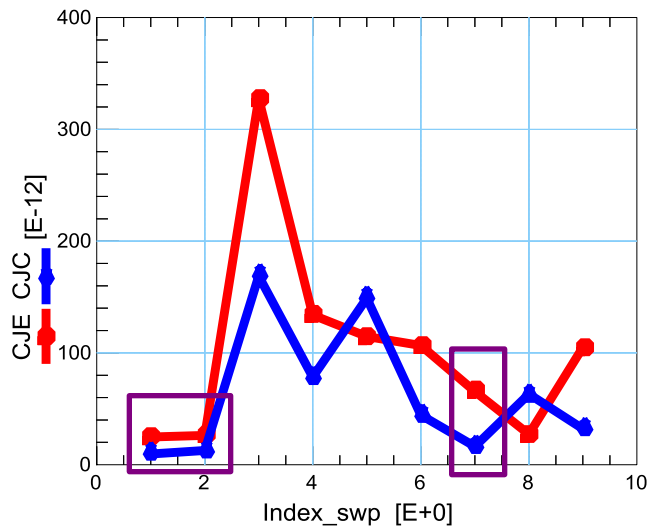
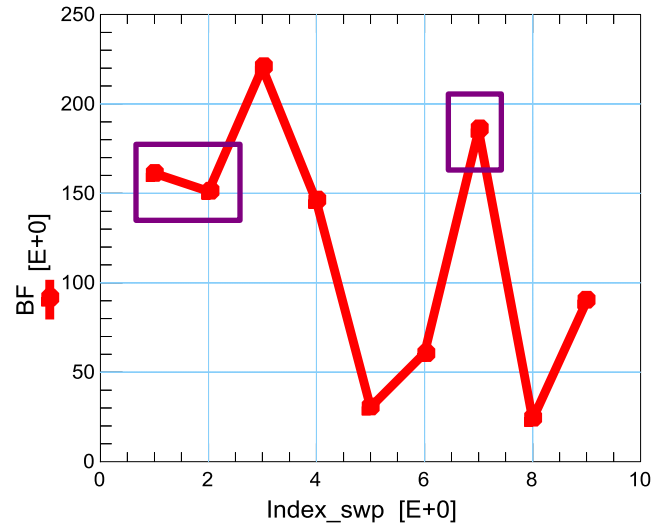
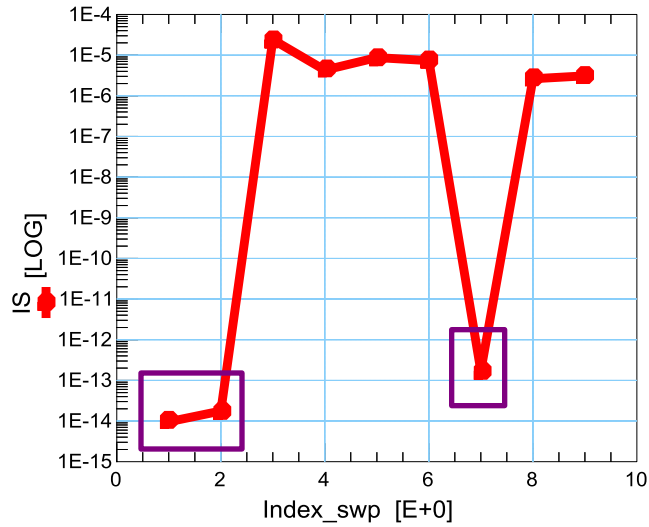
Compare beta\_static



Compare beta\_dynamic



# Gummel-Poon Parameters



- 1: Motorola\_2N2222
- 2: Motorola\_2N2907
- 3: Valvo\_AC125
- 4: Siemens\_AC151
- 5: UdSSR\_MP20B
- 6: Valvo\_OC71
- 7: HFO\_SF126
- 8: Siemens\_TF49
- 9: Siemens\_TF65

Silicon

**Note:**

**Transistor Technical Data Website (2016-11):**

**<http://www.semicon-data.com>**



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