

GF 100

Verwendung: Germanium-pnp-Hochfrequenztransistor für ZF-Verstärker in AM-Empfängern bei Umgebungstemperaturen von -40°C bis $+65^{\circ}\text{C}$

Standard: TGL 200-8390

Abmessungen: Bauform A 3/25b,
nach TGL 11 811
Masse $\approx 0,8 \text{ g}$

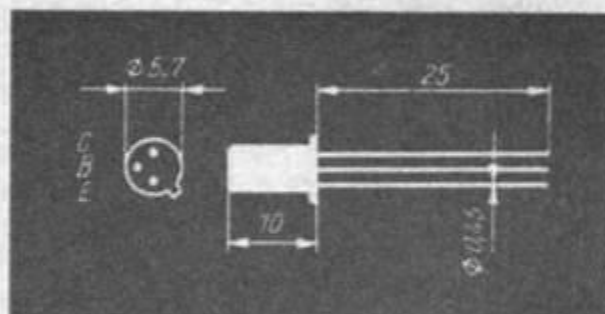
Zulässige Höchstwerte

für $\theta_a = 45^{\circ}\text{C}$

$-U_{CB0} = 15 \text{ V}$	$I_E = 15 \text{ mA}$
$-U_{EB0} = 10 \text{ V}$	$-I_B = 5 \text{ mA}$
$-I_C = 15 \text{ mA}$	$\theta_j = 75^{\circ}\text{C}$
	$\theta_a = 65^{\circ}\text{C}$

Kennwerte bei $\theta_a = 25^{\circ}\text{C} -5 \text{ grad}$

Wärmewiderstand $R_{th} \leq 0,5 \frac{\text{grad}}{\text{mW}}$



	Min	Typ	Max	Meßbedingungen
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Restströme

$-I_{CBO}$		$1,5 \mu\text{A}$	$10 \mu\text{A}$	$-U_{CB} = 6 \text{ V}$
$-I_{CBO}$		$50 \mu\text{A}$	$500 \mu\text{A}$	$-U_{CB} = 25 \text{ V}$
$-I_{CEO}$		$85 \mu\text{A}$	$600 \mu\text{A}$	$-U_{CE} = 6 \text{ V}$
$-I_{CES}$			$25 \mu\text{A}$	$-U_{CE} = 6 \text{ V}$
$-I_{EBO}$			$500 \mu\text{A}$	$-U_{EB} = 15 \text{ V}$

Grenzfrequenz

fh_{21b}	3 MHz	5 MHz		$-U_{CE} = 6 \text{ V}, -I_C = 1 \text{ mA}, f = 3 \text{ MHz}$
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Rauschmaß

F		6 dB	15 dB	$-U_{CE} = 6 \text{ V}, -I_C = 0,5 \text{ mA}, f = 0,5 \text{ MHz}$ $R_g = 1 \text{ k}\Omega$
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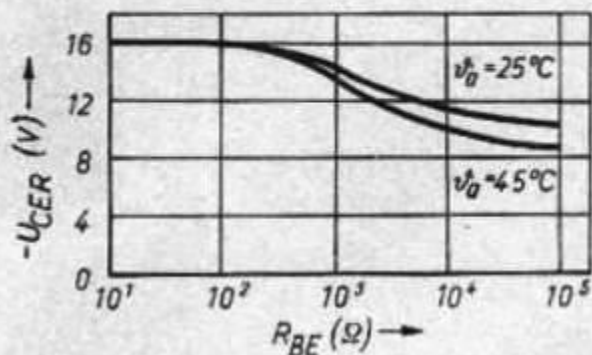
Vierpolwerte in Emitterschaltung

g_{11e}		$0,5 \text{ mS}$	$1,4 \text{ mS}$	$-U_{CE} = 6 \text{ V}, -I_C = 0,5 \text{ mA},$ $f = 0,5 \text{ MHz}$
C_{11e}		300 pF	700 pF	
g_{12e}		$3 \mu\text{S}$	$7 \mu\text{S}$	
C_{12e}		7 pF	14 pF	
y_{21e}	13 ms	$17,5 \text{ mS}$	$50 \mu\text{S}$	
g_{22e}		$30 \mu\text{S}$	50 pF	$-U_{CE} = 6 \text{ V}, -I_C = 2 \text{ mA}, f = 1 \text{ kHz}$
C_{22e}		25 pF		
h_{21e}	20	70		

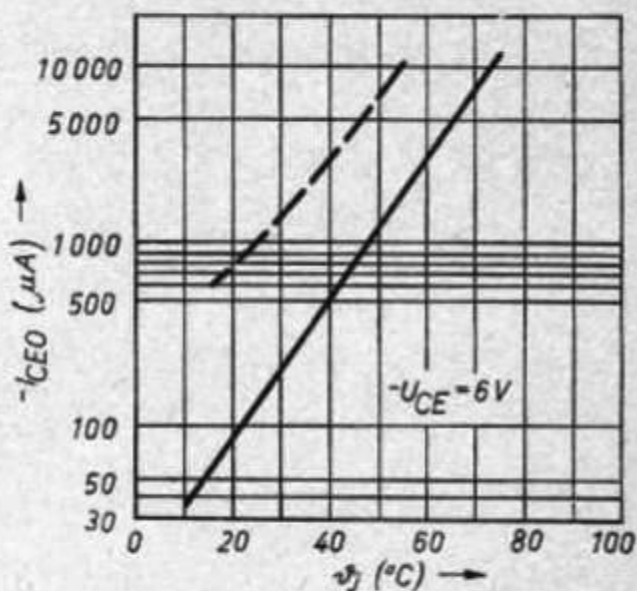
Bestellbeispiel für einen Transistor

Transistor GF 100 – TGL 200-8390

Kollektor-Emitter-Spannung in Abhängigkeit vom Basisabschlußwiderstand



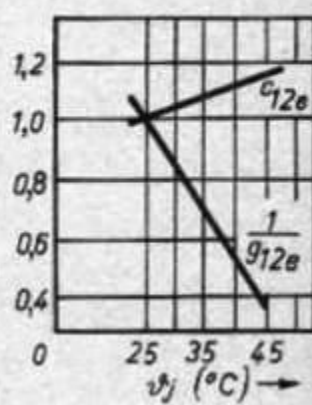
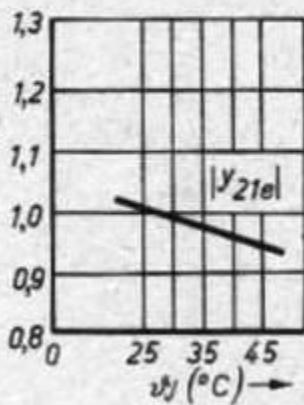
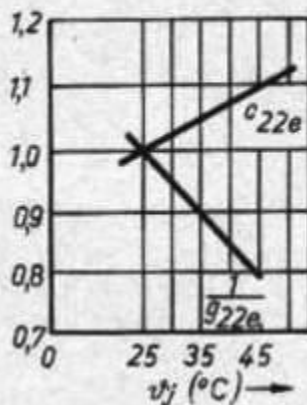
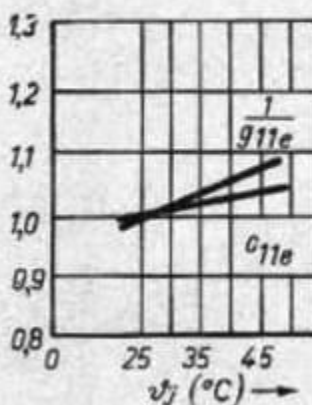
Kollektor-Reststrom als Funktion der Sperrschichttemperatur



----- Grenzwert — Mittelwert

Temperaturabhängigkeit der Parameter

$$\frac{1}{g_{11e}}, c_{11e} = f(\vartheta_j) \quad \frac{1}{g_{22e}}, c_{22e} = f(\vartheta_j) \quad |y_{21e}| = f(\vartheta_j) \quad \frac{1}{g_{12e}}, c_{12e} = f(\vartheta_j)$$



Mittlere Kennlinien für $\vartheta_a = 25^\circ\text{C}$

