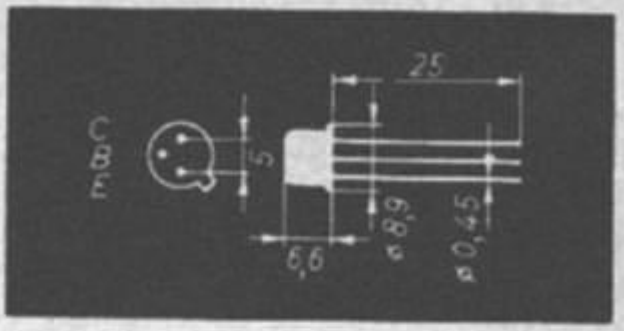
SC 103*

Verwendung: Silizium-pnp-Niederfrequenztransistor für hochwertige Niederfrequenzverstärkerstufen und Schaltstufen bei Umgebungstemperaturen ϑa von −40 °C bis +125 °C

Standard: TGL 200-8290

Abmessungen: Bauform B 3/25a, TGL 11 811
Masse ≈ 1 g



Zulässige Höchstwerte für ϑa = 45 °C

$-U_{CEO}$	= 10 V	$\hat{I}_E$	= 300 mA
$-U_{BEO}$	= 10 V	P_C	= 250 mW
$-I_C$	= 50 mA	ϑ_j	= 150 °C
$-\hat{I}_C$	= 200 mA	ϑ_a	= 125 °C
I_E	= 80 mA		

Kennwerte für ϑa = 25 °C −5 grd

Wärmewiderstand $R_{th} \leq 0{,}42 \frac{grd}{mW}$

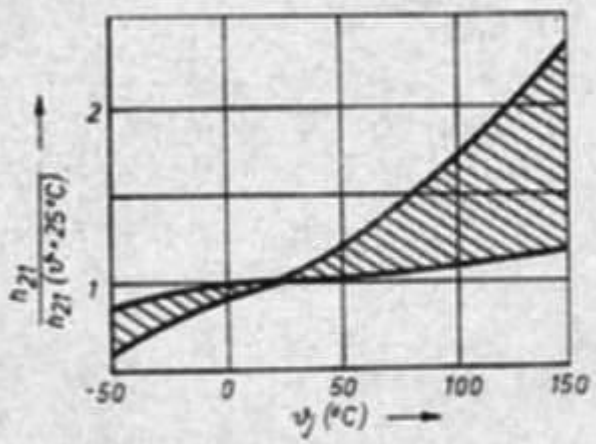
	Min.	Typ	Max.	Meßbedingungen
Restströme				
$-I_{CEO}$			0,1 µA	$-U_{CE}$ 6 V
$-I_{CEO}$			0,5 µA	$-U_{CE}$ 10 V
Gleichstromverstärkung				
B	15	23		$-U_{CE}$ = 6 V, $-I_C$ = 1 mA
B	6	10		$-U_{CE}$ = 1 V, $-I_C$ = 50 mA
Basis-Emitter-Spannung				
$-U_{BE}$	520 mV	550 mV	0,6 V	$-U_{CE}$ = 6 V, $-I_C$ = 1 mA
$-U_{BE}$	800 mV	872 mV	1,0 V	$-U_{CE}$ = 1 V, $-I_C$ = 50 mA
Restspannung				
$-U_{CErest}$			1,0 V	I_E = 50 mA
Sättigungsspannung				
$-U_{CEsat}$			0,4 V	$-I_C$ = 50 mA, $-I_B$ = 25 mA
Grenzfrequenz				
f_{h21b}	1,5 MHz	4,2 MHz		$-U_{CB}$ = 6 V, $-I_C$ = 1 mA
Vierpolparameter				
h_{11e}	0,5 kΩ	0,8 kΩ	1,2 kΩ	$-U_{CE}$ = 6 V, $-I_C$ = 1 mA, f = 1 kHz
h_{12e}	$2 \cdot 10^{-4}$	$3 \cdot 10^{-4}$	$6 \cdot 10^{-4}$	
h_{21e}	18		35	
h_{22e}	20 µS	72 µS	150 µS	

	Min.	Typ	Max.	Meßbedingungen
Basisbahnwiderstand				
r_{bb}	40 Ω	66 Ω	100 Ω	$-U_{CE} = 6$ V, $-I_C = 1$ mA, f = 5 MHz

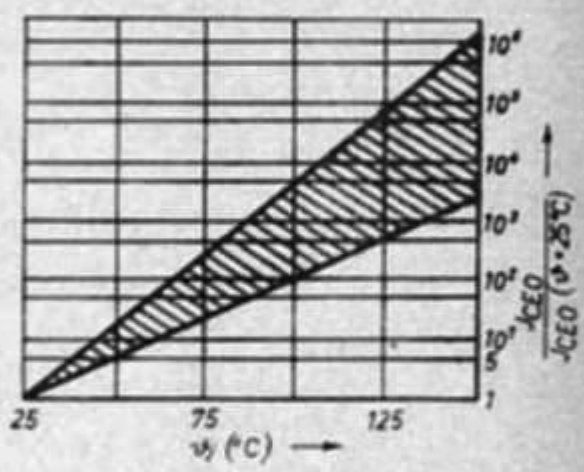
Bestellbeispiel für einen Transistor **Transistor SC 103 – TGL 200-8290**

*** nur für Ersatzbedarf**

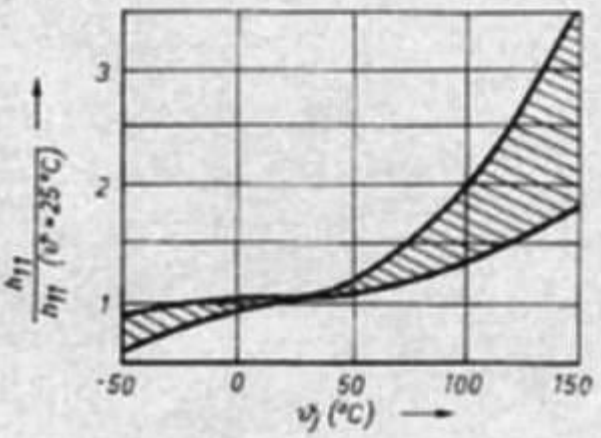
$h_{21} = f(\vartheta_j)$
$-U_{CE} = 6$ V
$-J_C = 1$ mA



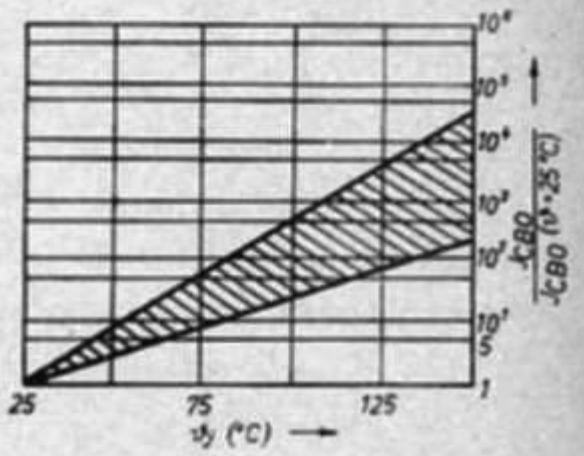
$-J_{CEO} = f(\vartheta_j)$
$-U_{CE} = 6$ V



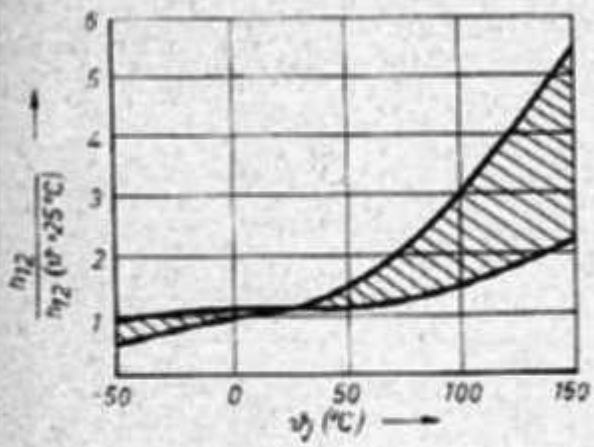
$h_{11} = f(\vartheta_j)$
$-U_{CE} = 6$ V
$-J_C = 1$ mA



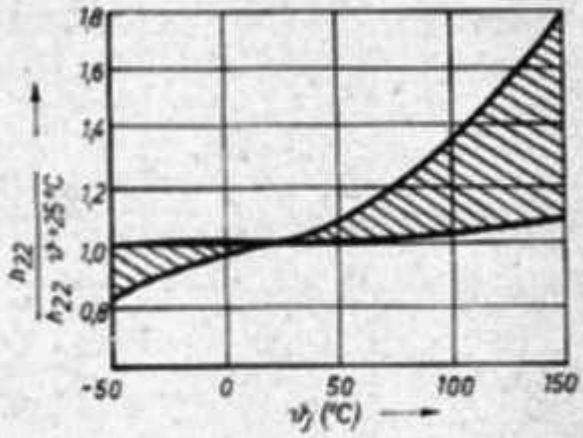
$-J_{CBO} = f(\vartheta_j)$
$-U_{CB} = 6$ V



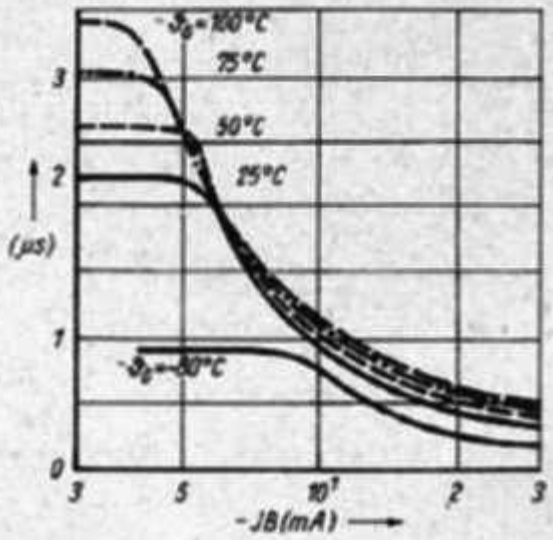
$h_{12} = f(\vartheta_j)$
$-U_{CE} = 6\,V$
$-J_C = 1\,mA$



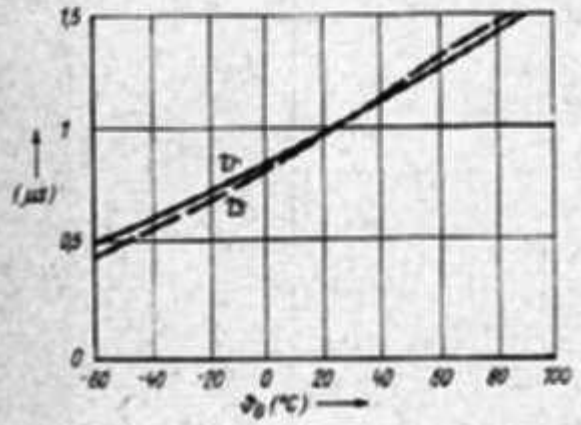
$h_{22} = f(\vartheta_j)$
$-U_{CE} = 6\,V$
$-J_C = 1\,mA$

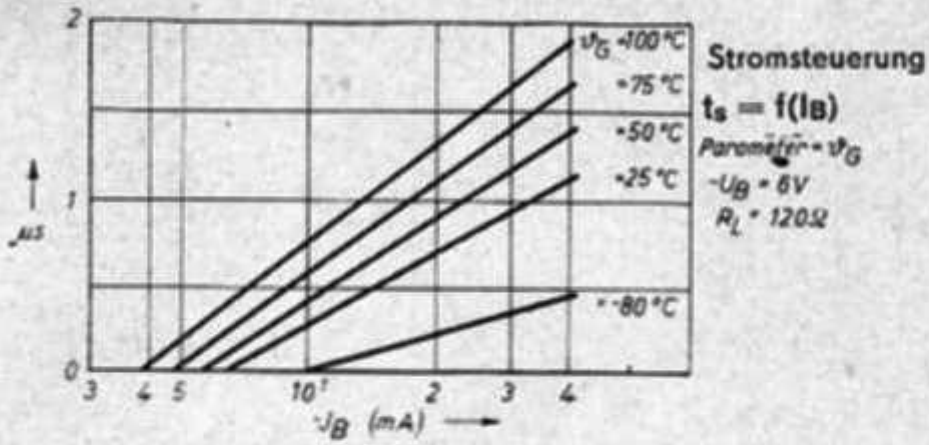


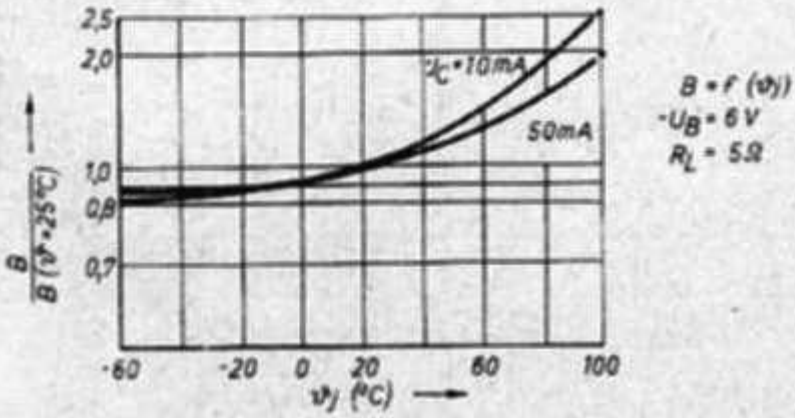
$-t_r = f(-J_B)$
Parameter: ϑ_B
$-U_B = 6\,V$; $R_L = 120\,\Omega$
(Stromsteuerung)



$t_r, t_s = f(\vartheta_B)$
$-U_B = 6\,V$; $R_L = 120\,\Omega$
(Stromsteuerung)




Stromsteuerung
$t_s = f(I_B)$
Parameter = ϑ_G
$-U_B$ = 6V
R_L = 120Ω
ϑ_G = 100 °C
= 75 °C
= 50 °C
= 25 °C
= -80 °C
µs
$-I_B$ (mA)


$B = f(\vartheta_j)$
$-U_B$ = 6 V
R_L = 5Ω
I_C = 10mA
50mA
$\frac{B}{B(\vartheta = 25°C)}$
ϑ_j (°C)