

Verwendung: Silizium-pnp-Niederfrequenztransistor mit kleiner Sperrspannung für Umgebungstemperaturen ϑ_a von -40°C bis $+125^\circ\text{C}$

Standard: TGL 200-8290

Abmessungen: Bauform B 3/25a, TGL 11 811

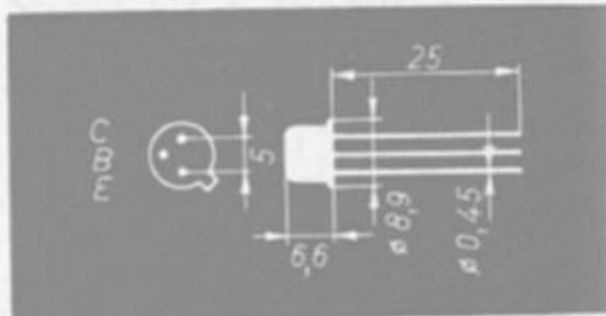
Masse ≈ 1 g

Zulässige Höchstwerte für $\vartheta_a = 45^\circ\text{C}$

$-U_{CE0} = 10$ V	$\hat{I}_E = 300$ mA
$-U_{BE0} = 10$ V	$P_C = 250$ mW
$-I_C = 50$ mA	$\vartheta_j = 150$ °C
$\hat{-I}_C = 200$ mA	$\vartheta_a = 125$ °C
$I_E = 80$ mA	

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

Kennwerte für $\vartheta_a = 25^\circ\text{C} -5$ grad



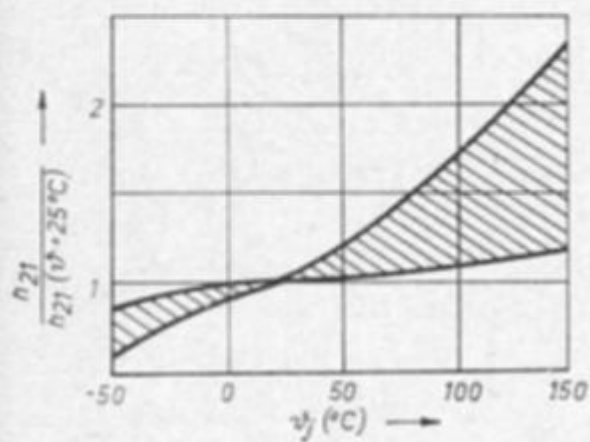
	Min.	Typ	Max.	Meßbedingungen
Restströme				
$-I_{CE0}$			0,1 μA	$-U_{CE} = 6$ V
$-I_{CE0}$			0,5 μA	$-U_{CE} = 10$ V
Gleichstromverstärkung				
B	6	12		$-U_{CE} = 6$ V, $-I_C = 1$ mA
B	3	5		$-U_{CE} = 1$ V, $-I_C = 50$ mA
Basis-Emitter-Spannung				
$-U_{BE}$	550 mV	590 mV	650 mV	$-U_{CE} = 6$ V, $-I_C = 1$ mA
$-U_{BE}$	0,9 V	1,1 V	1,5 V	$-U_{CE} = 1$ V, $-I_C = 50$ mA
Restspannung				
$-U_{CE_{rest}}$		1 V	1,2 V	$I_E = 50$ mA
Sättigungsspannung				
$-U_{CE_{sat}}$			0,4 V	$-I_C = 50$ mA, $-I_B = 25$ mA
Grenzfrequenz				
f_{h21b}	0,8 MHz	2,3 MHz		$-U_{CB} = 6$ V, $-I_C = 1$ mA

	Min.	Typ	Max.	Meßbedingungen
Vierpolparameter				
h_{11e}	0,2 k Ω	0,5 k Ω	0,8 k Ω	-U _{CE} = 6 V, -I _C = 1 mA, f = 1 kHz
h_{12e}	1 · 10 ⁻⁴	1,8 · 10 ⁻⁴	6 · 10 ⁻⁴	
h_{21e}	8	15	22	
h_{22e}	10 μ S	32 μ S	100 μ S	
Basisbahnwiderstand				
r_{bb}	25 Ω	41 Ω	60 Ω	-U _{CE} = 6 V, -I _C = 1 mA, f = 5 MHz
Kollektorkapazität				
C_c	20 pf	32 pF	60 pF	-U _{CE} = 6 V, -I _C = 1 mA, f = 5 MHz
Rauschmaß				
F		6 dB	15 dB	-U _{CE} = 1 V, -I _C = 0,5 mA, f = 1,2 kHz
Schaltzeitkonstanten				
τ_i		0,8 μ S	1,3 μ S	-U _{CE} = 6 V ... -U _{CErest} -I _C = -I _{CER} ... 50 mA
τ_s		1,6 μ S	3,2 μ S	
t_r	1,3 μ S	1,8 μ S	2,7 μ S	-U _{CE} = 6 V ... -U _{CErest} , -I _C = -I _{CER} ... 50 mA
t_s	1,3 μ S	1,7 μ S	3,5 μ S	-U _{CEsat} , -I _C = 50 mA

$$h_{21} = f(\psi_j)$$

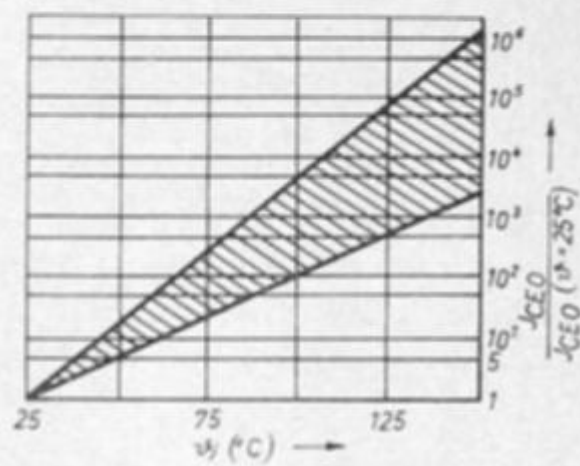
$$-U_{CE} = 6V$$

$$-I_C = 1mA$$



$$-I_{CEO} = f(\psi_j)$$

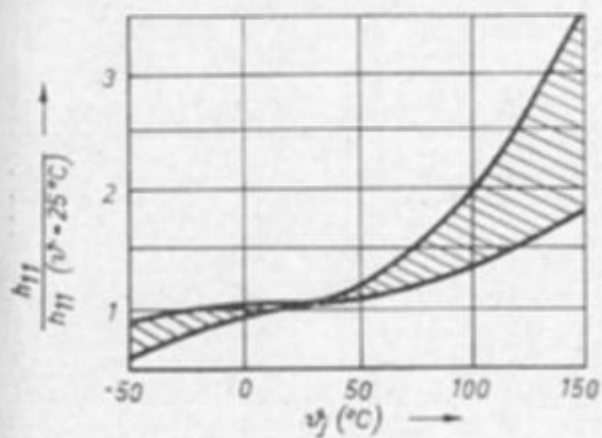
$$-U_{CE} = 6V$$



$$h_{11} = f(\psi_j)$$

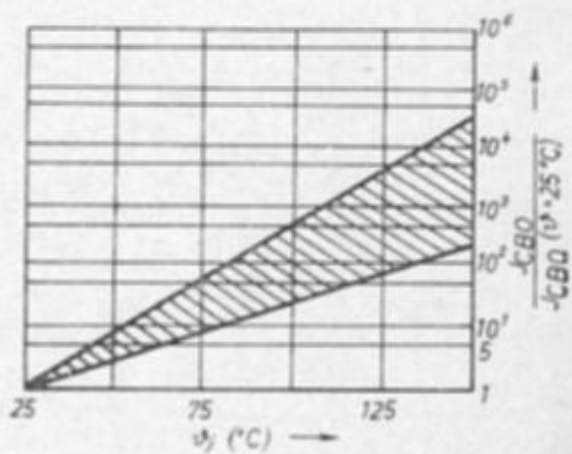
$$-U_{CE} = 6V$$

$$-I_C = 1mA$$

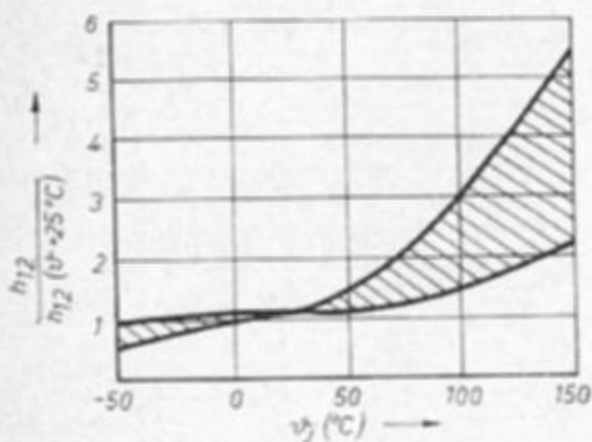


$$-I_{CBO} = f(\psi_j)$$

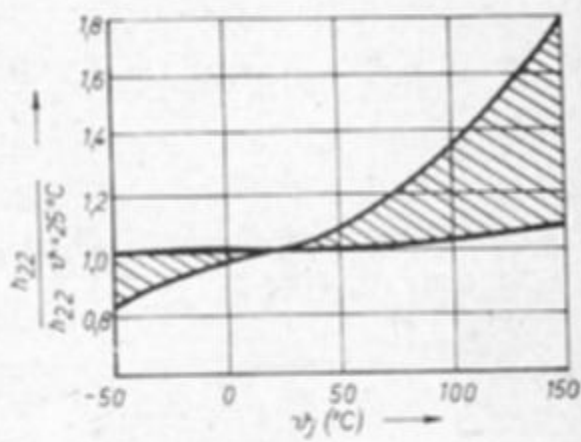
$$-U_{CB} = 6V$$



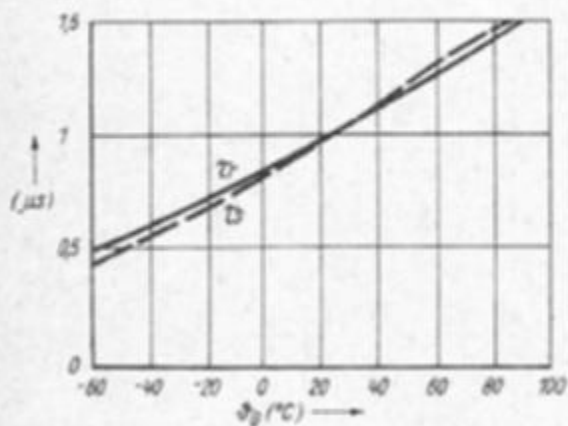
$h_{12} = f(\vartheta_j)$
 $-U_{CE} = 6V$
 $-I_C = 1mA$



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



$\tau_1, \tau_2 = f(\vartheta_B)$
 $-U_B = 6V; R_L = 120\Omega$
 (Stromsteuerung)



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

