

Abmessungen: Bauform A 3/15 - 3a,

TGL 11 811

Kollektor am Gehäuse

Masse $\approx 0,5$ g

Zulässige Höchstwerte gültig bis $\theta_{j\text{max}}$

$U_{\text{CBO}} = 40$ V $P_{\text{tot}} = 300$ mW

$U_{\text{CEO}} = 15$ V bei $\theta_a = 25^\circ\text{C}$

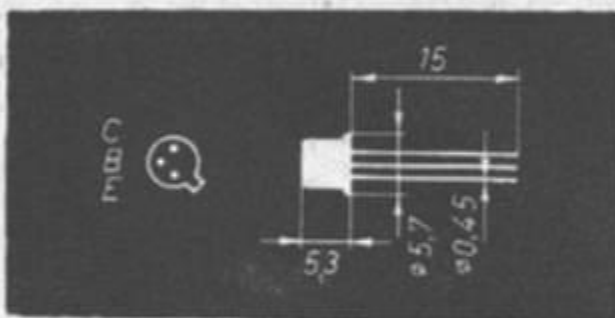
$U_{\text{EBO}} = 5$ V $\theta_j = 175^\circ\text{C}$

$I_{\text{c}} = 200$ mA $\theta_a = 125^\circ\text{C}$

Wärmewiderstand $R_{\text{th}} \leq 500 \frac{\text{grad}}{\text{W}}$

$R_{\text{thl}} \leq 150 \frac{\text{grad}}{\text{W}}$

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



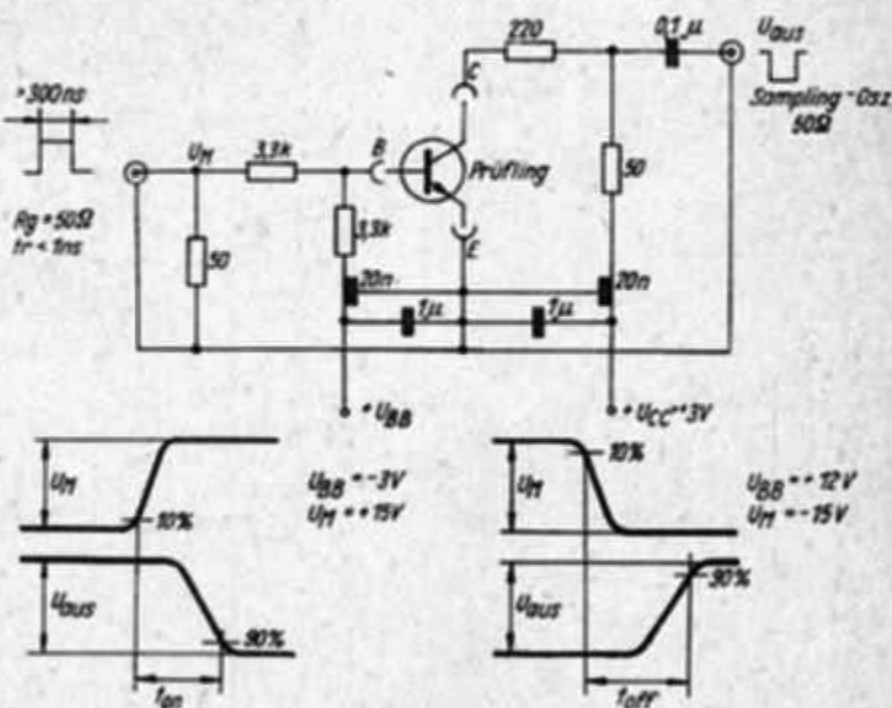
	Min.	Typ	Max.	Meßbedingungen	Stromverstärkungsgruppen
Restströme					
I_{cBO}		10 nA	50 nA	$U_{\text{CB}} = 20$ V	
Durchbruchspannungen					
$U_{(\text{BR})\text{CBO}}$	40 V	60 V		$I_{\text{c}} = 10 \mu\text{A}$	
$U_{(\text{BR})\text{CEO}}$	15 V	35 V		$I_{\text{c}} = 5$ mA	
$U_{(\text{BR})\text{EBO}}$	5 V	7,5 V		$I_{\text{E}} = 5 \mu\text{A}$	
Sättigungsspannung					
U_{CEsat}		0,25 V	0,5 V	$I_{\text{c}} = 10$ mA, $I_{\text{B}} = 1$ mA	
U_{BEsat}		0,85 V		$I_{\text{c}} = 10$ mA, $I_{\text{B}} = 1$ mA	
Übergangsfrequenz					
f_{T}	300 MHz	480 MHz		$U_{\text{CE}} = 10$ V, $I_{\text{c}} = 10$ mA, $f = 100$ MHz	
Ausgangskapazität					
C_{22b}		2,8 pF	5 pF	$U_{\text{CE}} = 10$ V, $I_{\text{E}} = 0$, $f = 2$ MHz	
Gleichstromverstärkung					
B	18	80		$U_{\text{CE}} = 1$ V, $I_{\text{c}} = 10$ mA	A
	18		35		B
	28		71		C
	56		140		D
	112		280		E
	224		560		

	Min.	Typ	Max.	Meßbedingungen	Stromverstärkungsgruppen
Schaltzeiten					
t_{on}		15 ns	40 ns	$I_C = 10 \text{ mA}$, $I_{B1} = 3 \text{ mA}$ $R_L = 270 \Omega$, $-I_{B2} = 1,5 \text{ mA}$	
t_{off}		35 ns	75 ns		

Bestellbeispiel für einen Transistor der Stromverstärkungsgruppe B

Transistor SS 108 B

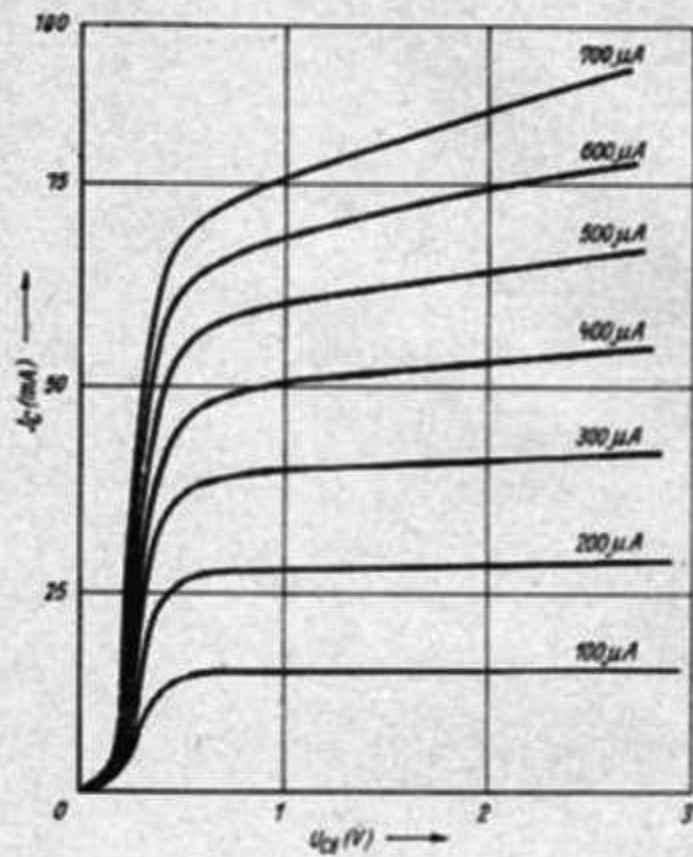
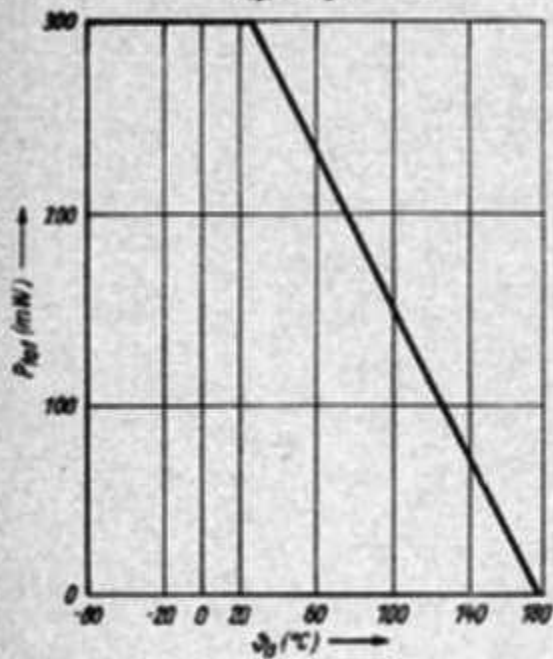
Meßschaltung zur Messung der Einschaltzeit (t_{on}) und der Ausschaltzeit (t_{off})



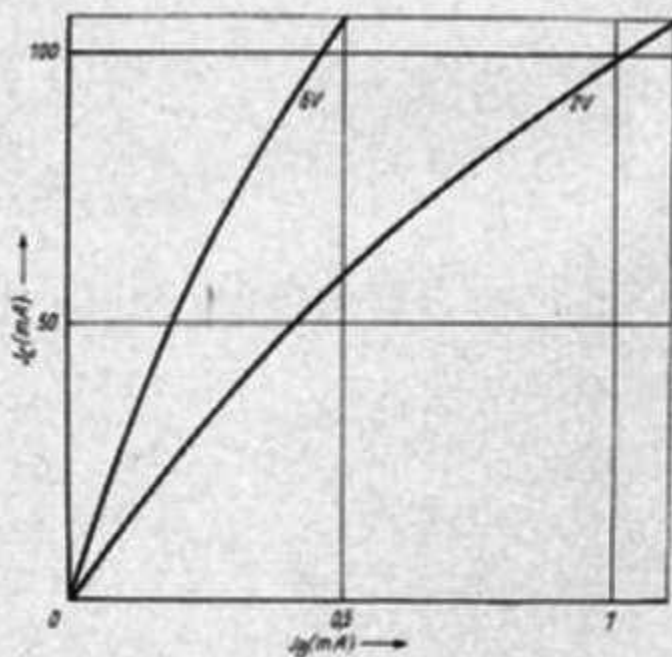
$I_C = f(U_{CE})$
 I_B Parameter

freitragende Montage

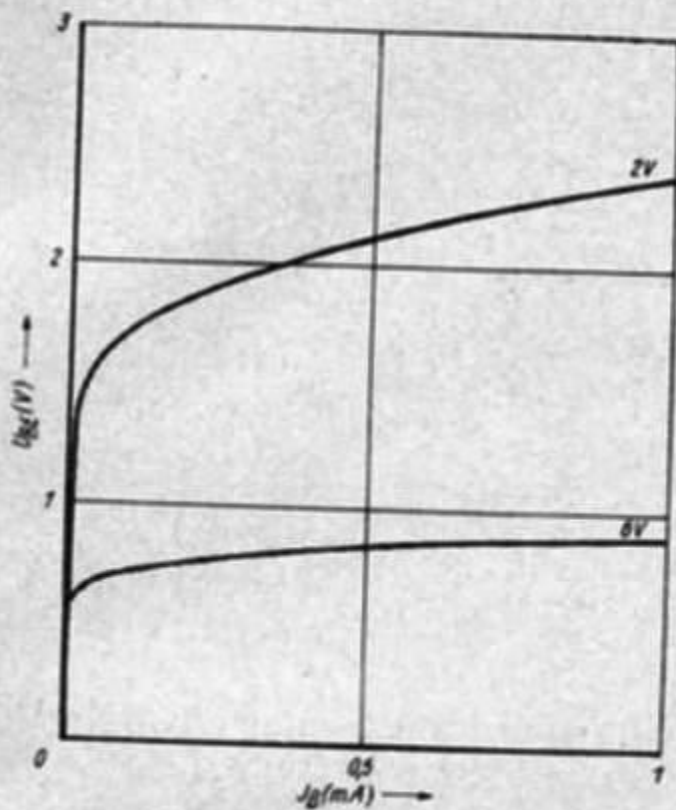
$P_{tot} = f(\vartheta_B)$



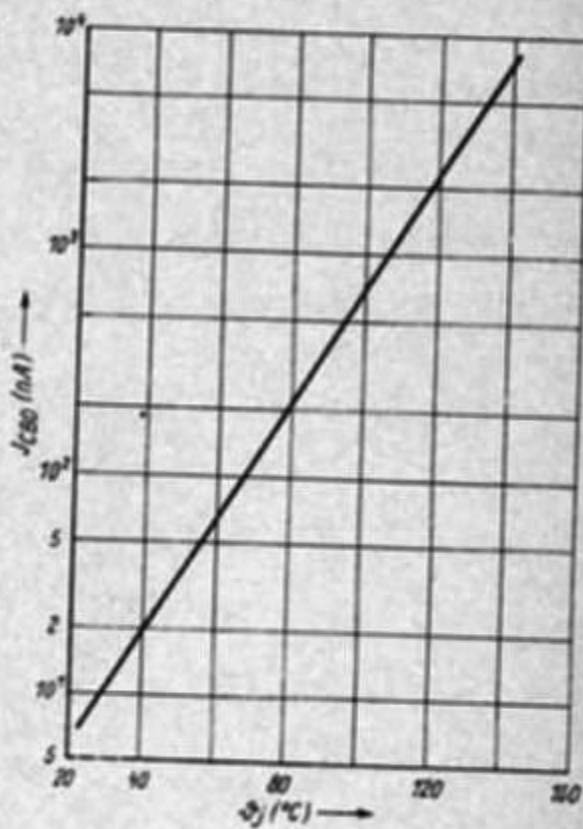
$I_C = f(I_B)$
 U_{CE} -Parameter



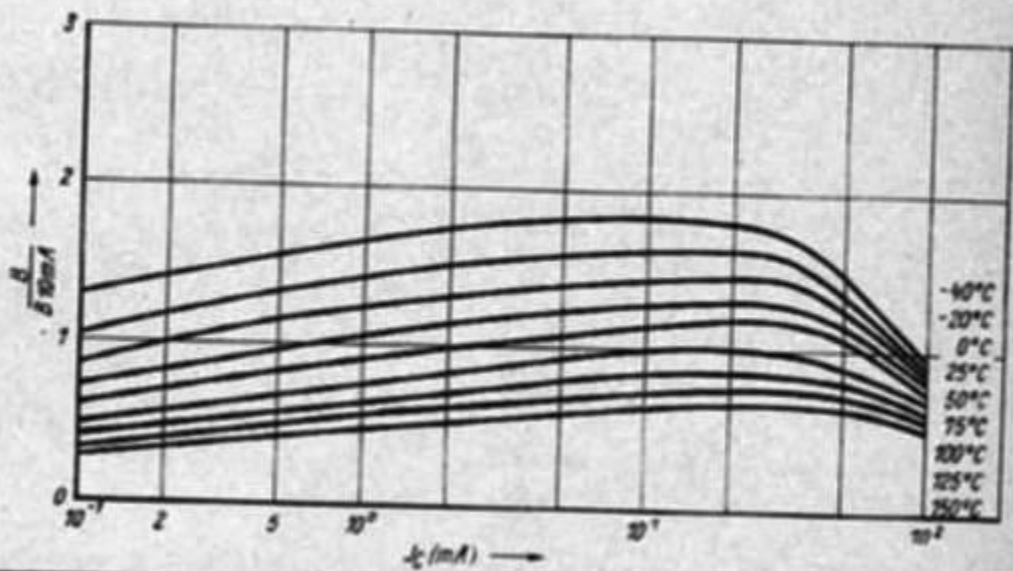
$U_{BE} = f(I_B)$
 $U_{CE} = \text{Parameter}$



$I_{C80} = f(\vartheta_j)$
 $U_{CE} = 20V$

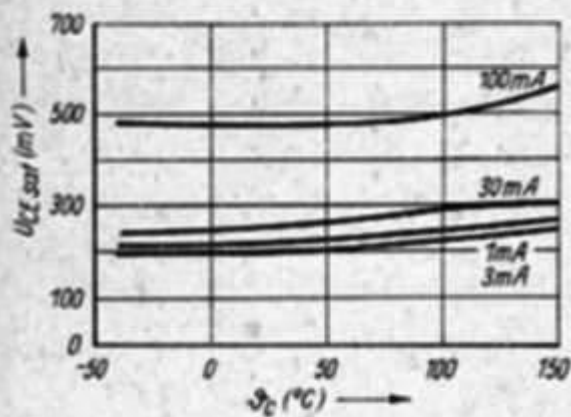


$\beta = f(I_C)$
 $U_{CE} = 7V$
 $\vartheta_C = \text{Parameter}$



$$U_{CE sat} = f(\vartheta_C), I_C = \text{Parameter}$$

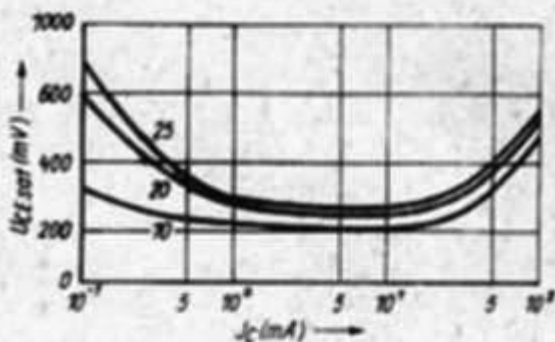
$$\frac{I_C}{I_B} = 20$$



$$U_{CE sat} = f(I_C)$$

$$\frac{I_C}{I_B} = \text{Parameter}$$

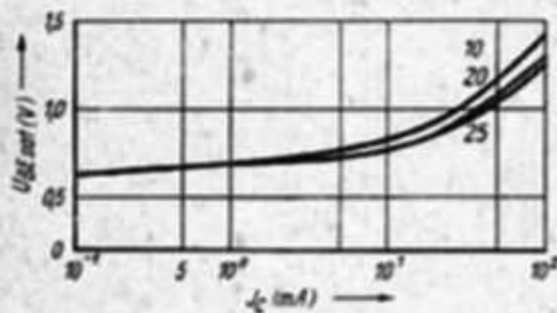
$$\vartheta_C = 25^\circ\text{C}$$



$$U_{BE sat} = f(I_C)$$

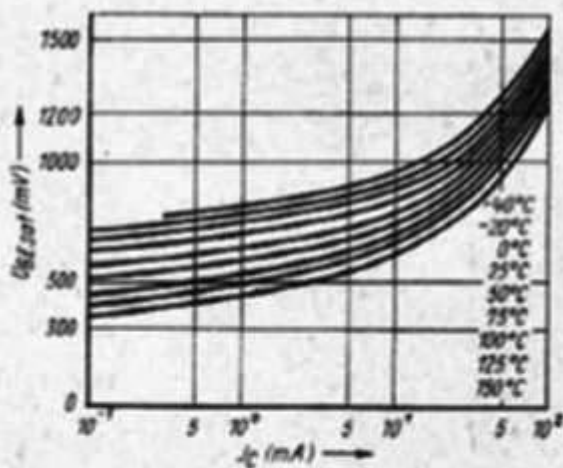
$$\frac{I_C}{I_B} = \text{Parameter}$$

$$\vartheta_C = 25^\circ\text{C}$$



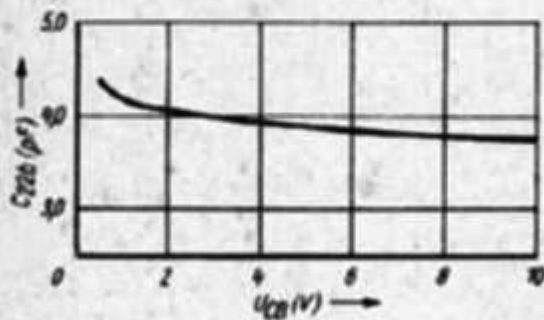
$$U_{BE sat} = f(I_C), \vartheta_C = \text{Parameter}$$

$$\frac{I_C}{I_B} = 20$$



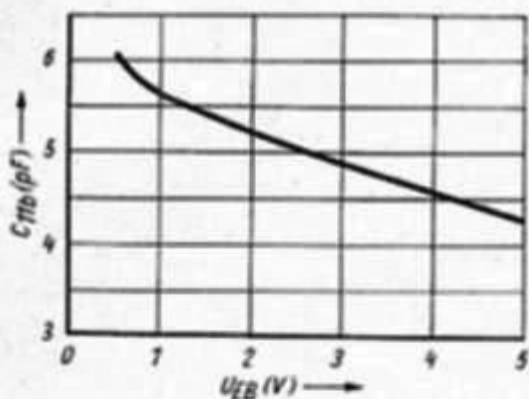
$$C_{22b} = f(U_{CE})$$

$$f = 2\text{MHz}$$



$$C_{110} = f(U_{EB})$$

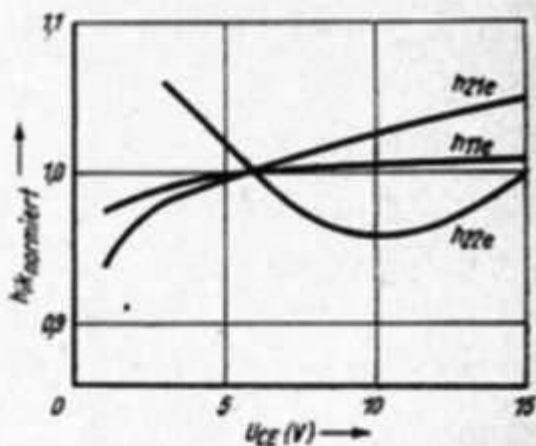
$$f = 2\text{MHz}$$



$$h\text{-Parameter (normiert)} = f(U_{CE})$$

$$\text{bei } I_C = 2\text{mA}, f = 1\text{kHz}$$

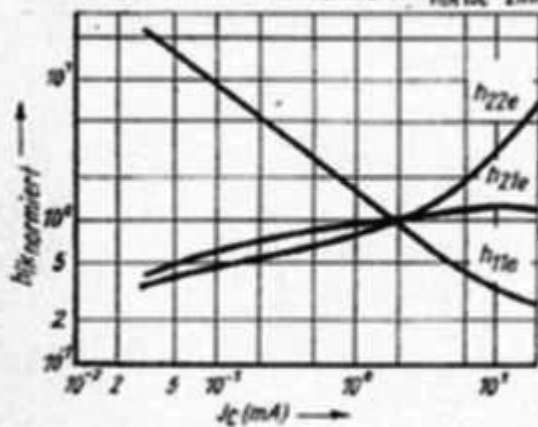
$$h_{ik} \text{ normiert} = \frac{h_{ik}(U_{CE})}{h_{ik}(U_{CE} = 6\text{V})}$$



$$h\text{-Parameter (normiert)} = f(I_C) \text{ bei } U_{CE} = 6\text{V}$$

$$f = 1\text{kHz}$$

$$h_{ik} \text{ normiert} = \frac{h_{ik}(I_C)}{h_{ik}(I_C = 2\text{mA})}$$

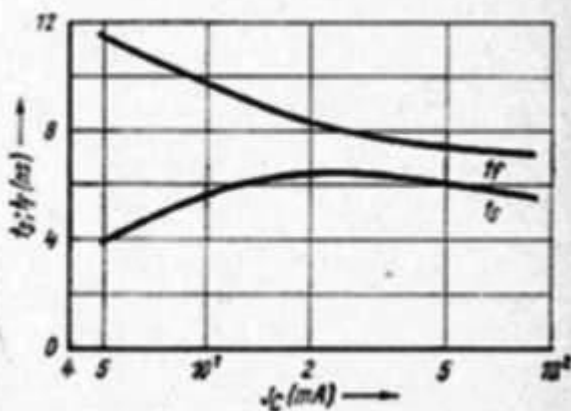


$$t_b; t_r = f(I_C)$$

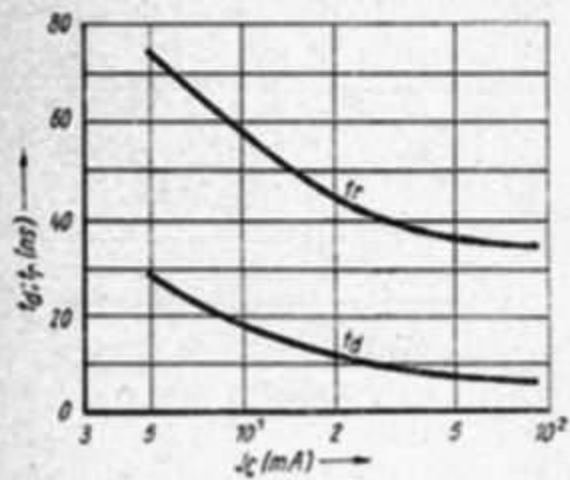
$$\text{bei } U_B = 10\text{V}$$

$$I_C = 10\text{ } \mu\text{A} \text{ -- } 10\text{ mA}$$

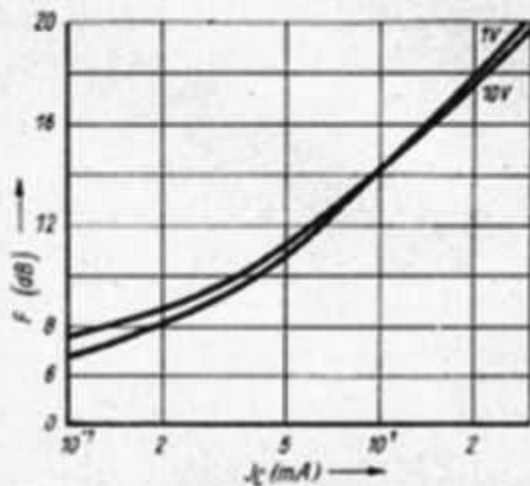
$$R_C = R_B$$



$t_d; t_r = f(I_c)$
 bei $U_{CE} = 10V$
 $I_c = 10/\beta_1 \dots 10/\beta_2$
 $R_C = R_B$



$F = f(I_c)$
 bei $R_B = 500\Omega$
 U_{CE} = Parameter
 $f = 1kHz$



$t_{on}; t_{off} = f(m)$
 bei $I_c = 10mA$
 $R_C = 270\Omega$

