

**Silizium-PNP-Epitaxial-Planar-Leistungstransistoren**  
**Silicon PNP Epitaxial Planar Power Transistors**

**Anwendungen:** Allgemein im NF-Bereich  
**Vergleichbarer Typ:** BD 234, BD 236, BD 238

**Application:** General in AF-range  
**Comparable type:** BD 234, BD 236, BD 238

**Besondere Merkmale:**

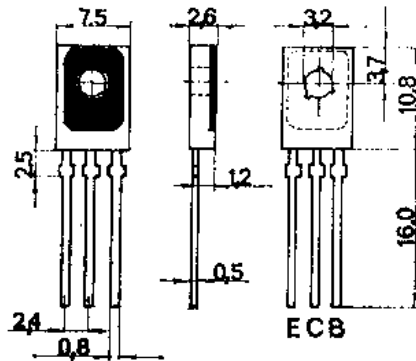
- Verlustleistung 20 W
- Gepaart lieferbar
- SD 346, SD 348, SD 350 sind komplementär zu SD 345, SD 347, SD 349

**Features:**

- Power dissipation 20 W
- Matched pairs available
- SD 346, SD 348, SD 350 are complementary to SD 345, SD 347, SD 349

**Abmessungen in mm**

**Dimensions in mm**



Kollektor mit metallischer Montagefläche verbunden  
 Gehäuse Bauform N, ähnlich SOT 32  
 TGL 11 811  
 Plastikgehäuse  
 Masse ca. 0,75 g

Collector connected with metallic surface  
 Case construction N, similar SOT 32  
 TGL 11 811  
 Plastic case  
 Weight about 0.75 g

**Absolute Grenzdaten**

**Absolute maximum ratings**

	SD 346	SD 348	SD 350
Kollektor-Basis-Spannung Collector-base voltage	$-U_{CBO}$ 45	60	80
Kollektor-Emitter-Spannung Collector-emitter voltage	$-U_{CEO}$ 45	60	80
Emitter-Basis-Spannung Emitter-base voltage	$-U_{EBO}$	5	V
Kollektorstrom Collector current	$-I_C$	3	A
Kollektorspitzenstrom Collector peak current	$-I_{CM}$	6	A
Basisstrom Base current	$-I_B$	1	A
Gesamtverlustleistung Total power dissipation $t_c \leq 25^\circ\text{C}$	$P_{tot}$	20	W

Sperrschichttemperatur Junction temperature	$t_j$	150	$^\circ\text{C}$
Umgebungstemperaturbereich Ambient temperature range	$t_{amb}$	-55 ... +125	$^\circ\text{C}$
Lagerungstemperaturbereich Storage temperature range	$t_{stg}$	-55 ... +150	$^\circ\text{C}$

**Wärmewiderstände**  
**Thermal resistances**

	Min.	Typ.	Max.
Sperrschicht-Umgebung Junction-ambient	$R_{thJA}$	100	$\text{K/W}$
Sperrschicht-Gehäuse Junction-case	$R_{thJC}$	6,25	$\text{K/M}^2$

**Statische Kenngrößen**

**DC characteristics**  $t_{amb} = 25^\circ\text{C} - 5\text{K}$

Kollektor-Basis-Reststrom Collector cut-off current $-U_{CB} = 30\text{V}$	$-I_{CBO}$	0,05	1	$\mu\text{A}$
Kollektor-Emitter-Reststrom Collector cut-off current $-U_{CE} = 45\text{V}$	$-I_{CEO}$	16		$\mu\text{A}$
$-U_{CE} = 60\text{V}$	$-I_{CEO}$	16		$\mu\text{A}$
$-U_{CE} = 80\text{V}$	$-I_{CEO}$	16		$\mu\text{A}$
Emitter-Basis-Reststrom Emitter cut-off current $-U_{EB} = 5\text{V}$	$-I_{EBO}$	1 nA	10	$\mu\text{A}$
Kollektor-Emitter-Reststrom Collector cut-off current $R_{BE} = 1\text{k}\Omega$	$-I_{CER}$	20		nA
$-U_{CE} = 45\text{V}$	$-I_{CER}$	20		nA
$-U_{CE} = 60\text{V}$	$-I_{CER}$	20		nA
$-U_{CE} = 80\text{V}$	$-I_{CER}$	20		nA
Kollektor-Basis-Durchbruchspannung Collector-base breakdown voltage $-I_C = 1\text{mA}$	$-U_{(BR)CBO}$	45		V
	$-U_{(BR)CBO}$	60		V
	$-U_{(BR)CBO}$	80		V
Kollektor-Emitter-Durchbruchspannung Collector-emitter breakdown voltage $-I_C = 100\text{mA}$	$-U_{(BR)CEO}$	45		V
	$-U_{(BR)CEO}$	60		V
	$-U_{(BR)CEO}$	80		V

	Min.	Typ.	Max.
Emitter-Basis-Durchbruchspannung Emitter-base breakdown voltage $-I_E = 1 \mu A$			
$-U_{(BR)EBO}$	5		V
Kollektor-Emitter-Sättigungsspannung Collector saturation voltage $-I_C = 2 A, -I_B = 0,2 A$ $-I_C = 500 mA, -I_B = 50 mA$			
$-U_{CEsat}^{1)}$		300	1000 mV
$-U_{CEsat}$		113	mV
Basis-Emitter-Sättigungsspannung Base saturation voltage $-I_C = 2 A, -I_B = 0,2 A$			
$-U_{BEsat}^{1)}$		1,0	1,5 V
Basis-Emitter-Spannung Base-emitter voltage $-U_{CE} = 2 V, -I_C = 2 mA$			
$-U_{BE}$		0,8	1,2 V
Gleichstromverstärkung DC forward current transfer ratio $-U_{CE} = 10 V, -I_C = 5 mA$ $-U_{CE} = 2 V, -I_C = 500 mA$ $-U_{CE} = 2 V, -I_C = 2 mA$			
$h_{FE}$	25	100	
$h_{FE}^{1)}$	40	90	250
$h_{FE}^{1)}$	25	60	
Paarungsbedingung $h_{FE}$ matched pair ratio $-U_{CE} = 2 V, -I_C = 500 mA$			
$\frac{h_{FE1}^{1)}$			1,4
$\frac{h_{FE2}$			

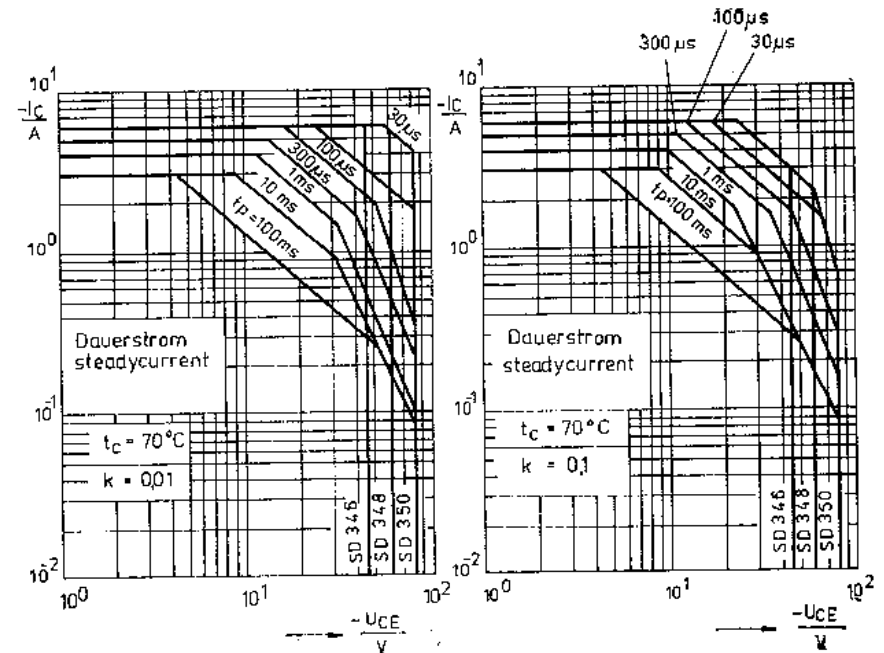
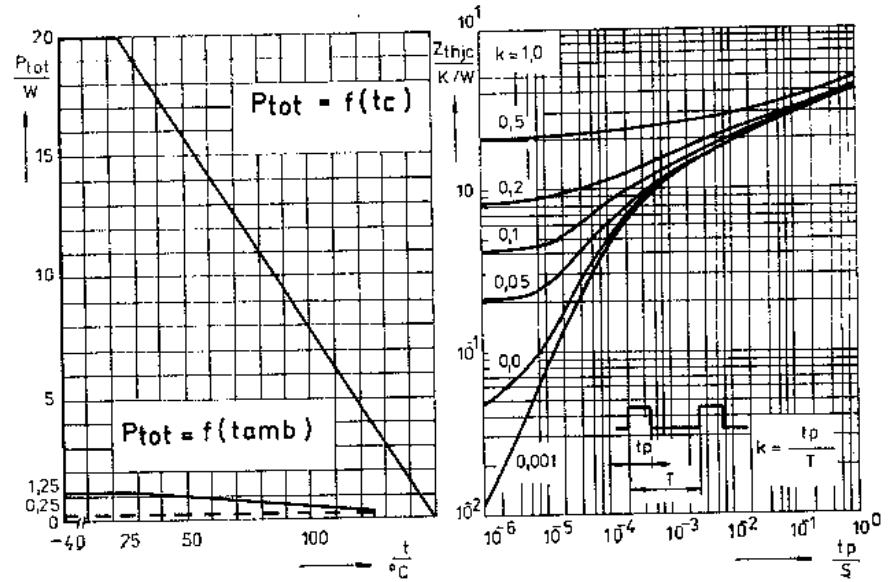
Dynamische Kenngrößen

AC characteristics  $t_{amb} = 25^\circ C - 5 K$

Transitfrequenz

Gain bandwidth product

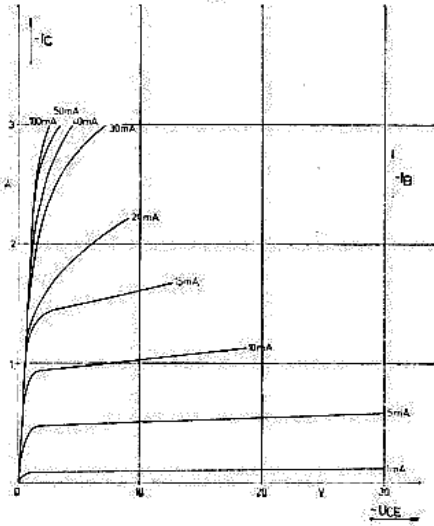
$-U_{CE} = 10 V, -I_C = 200 mA, f = 20 MHz$   $f_T$  60 120 MHz



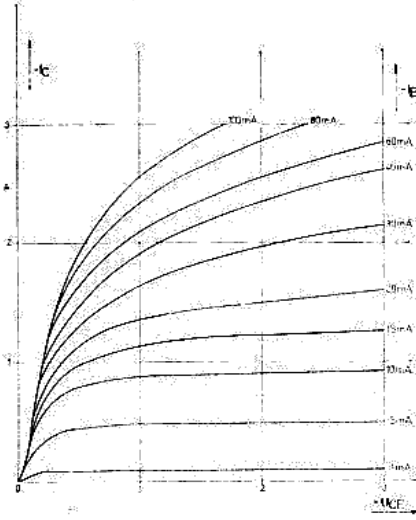
<sup>1)</sup> Messung erfolgt impulsmäßig,  $t_p/T = 0,01, t_p = 0,03 ms$

Pulse measurement

SD 350  
 $-I_C = f(-U_{CE})$   
 $-I_B = \text{Parameter}$



SD 350  
 $-I_C = f(U_{CE})$   
 $-I_B = \text{Parameter}$



SD 350  
 $-I_C = f(-U_{CE})$   
 $-I_B = \text{Parameter}$

