Silicon NPN Transistor

BD179

80V / 3A

DATASHEET

OEM – Telefunken

Source: Telefunken Databook 1975

Datasheet Rev. 1.3 – 12/18 – data without warranty / liability

BD 175 · BD 177 · BD 179

Silizium-NPN-Epibasis-Leistungstransistoren
Silicon NPN Epibase Power Transistors

Anwendungen: Audio-Verstärker, -Treiber und -Endstufen
Allgemein im NF-Bereich
Applications: *Audio amplifier, driver and output stages*
General in AF-range

Besondere Merkmale:

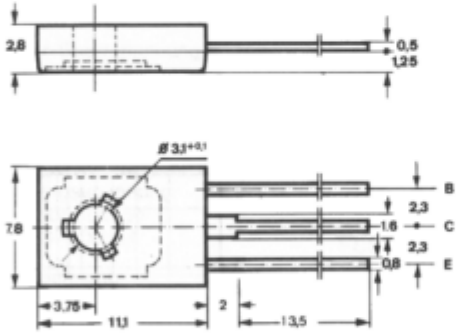
- Hohe Spitzenleistung
- Verlustleistung 30 W
- Gepaart lieferbar
- BD 175, BD 177, BD 179 sind komplementär zu BD 176, BD 178, BD 180

Features:

- *High peak power*
- *Power dissipation 30 W*
- *Matched pairs available*
- *BD 175, BD 177, BD 179 are complementary to BD 176, BD 178, BD 180*

Vorläufige technische Daten · *Preliminary specifications*

Abmessungen in mm
Dimensions in mm



Kollektor mit metallischer Montagefläche verbunden
Collector connected with metallic surface

Zubehör
Accessories

Isolierscheibe *Isolating washer*	Best. Nr. 119 880
Zahnscheibe *Lock washer*	Best. Nr. 119 881

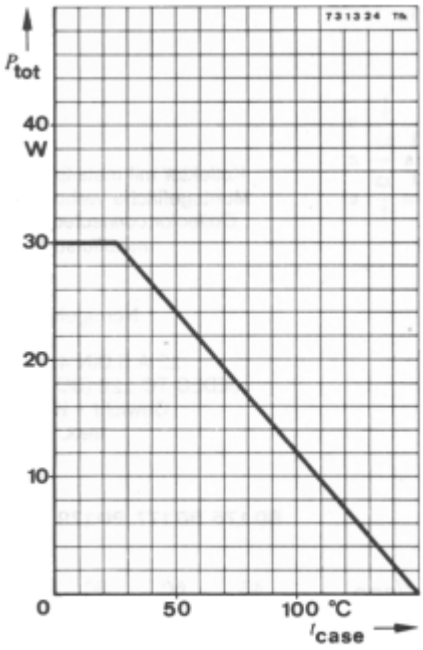
Normgehäuse
Case
12 A 3 DIN 41 869
JEDEC TO 126 (SOT 32)
Gewicht · *Weight*
max. 0,8 g

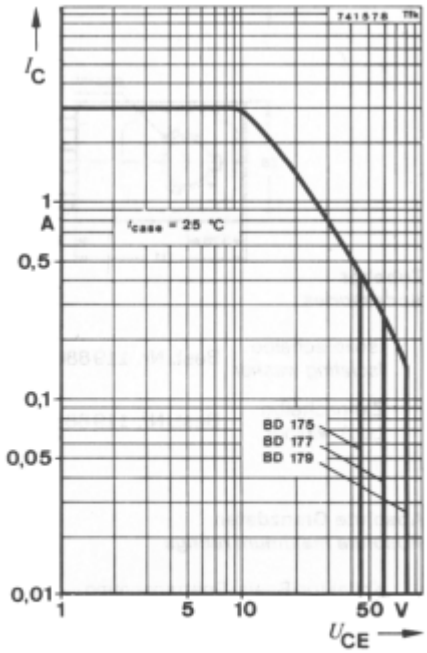
Absolute Grenzdaten
Absolute maximum ratings

		BD 175	BD 177	BD 179	
Kollektor-Basis-Sperrspannung *Collector-base voltage*	U_{CBO}	45	60	80	V
Kollektor-Emitter-Sperrspannung *Collector-emitter voltage*	U_{CEO}	45	60	80	V
Emitter-Basis-Sperrspannung *Emitter-base voltage*	U_{EBO}		5		V

BD 175 · BD 177 · BD 179

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* $t_{case} \leq 25\,°C$	P_{tot}	30	W
Sperrschichttemperatur *Junction temperature*	t_j	150	°C
Lagerungstemperaturbereich *Storage temperature range*	t_{stg}	−55...+150	°C
Anzugsdrehmoment *Tightening torque*	M_A [1])	70	N cm



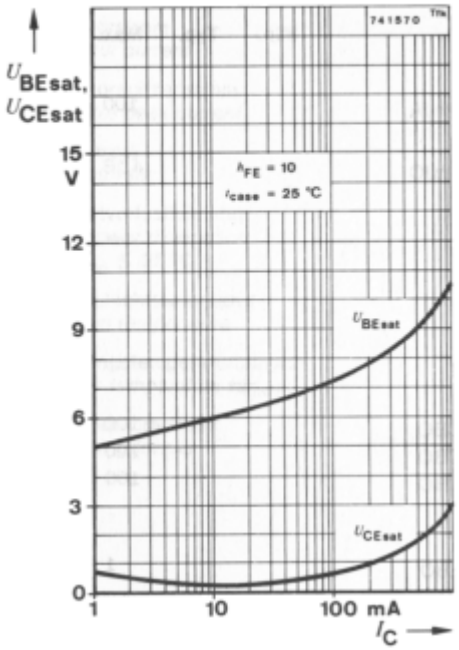
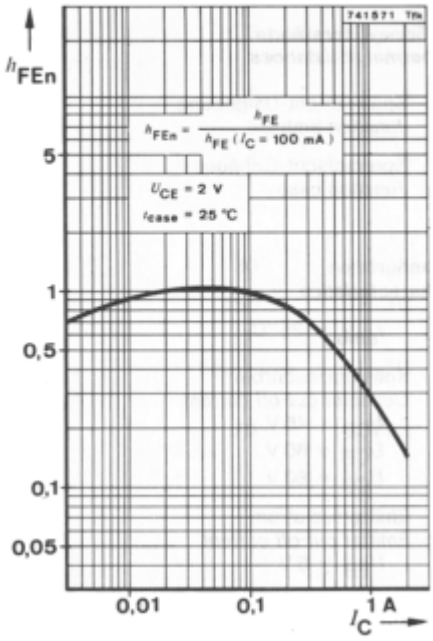


[1]) mit M3-Schraube und Zahnscheibe
with screw M3 and lock washer

Best. Nr. 119881

BD 175 · BD 177 · BD 179

Wärmewiderstände ***Thermal resistances***			Min.	Typ.	Max.	
Sperrschicht-Umgebung *Junction ambient*		R_{thJA}			100	°C/W
Sperrschicht-Gehäuse *Junction case*		R_{thJC}			4,16	°C/W
Kenngrößen ***Characteristics***						
t_{amb} = 25 °C						
Kollektorreststrom *Collector cut-off current*						
U_{CB} = 45 V	**BD 175**	I_{CBO}			100	µA
U_{CB} = 60 V	**BD 177**	I_{CBO}			100	µA
U_{CB} = 80 V	**BD 179**	I_{CBO}			100	µA
Emitterreststrom *Emitter cut-off current*						
U_{EB} = 5 V		I_{EBO}			1	mA
Kollektor-Emitter-Sperrspannung *Collector-emitter sustaining voltage*						
I_C = 100 mA	**BD 175**	U_{CEOsus} [1]	45			V
	BD 177	U_{CEOsus} [1]	60			V
	BD 179	U_{CEOsus} [1]	80			V
Kollektor-Sättigungsspannung *Collector saturation voltage*						
I_C = 1 A, I_B = 100 mA		U_{CEsat} [1]			800	mV
Basis-Emitter-Spannung *Base-emitter voltage*						
U_{CE} = 2 V, I_C = 1 A		U_{BE} [1]			1,3	V
Kollektor-Basis-Gleichstromverhältnis *DC forward current transfer ratio*						
U_{CE} = 2 V, I_C = 150 mA		h_{FE} [1]	40		236	
U_{CE} = 2 V, I_C = 1 A		h_{FE} [1]	15			
Für Paare gilt das h_{FE}-Verhältnis *h_{FE} matched pair ratio*						
U_{CE} = 2 V, I_C = 150 mA [1]					1,4	
Transitfrequenz *Gain bandwidth product*						
U_{CE} = 10 V, I_C = 250 mA, f = 1 MHz		f_T	3			MHz

[1] $\frac{t_p}{T}$ = 0,02, t_p = 0,3 ms

BD 175 · BD 177 · BD 179