

Diffundierter Silizium-NPN-Mesa-Leistungstransistor Diffused Silicon NPN Mesa Power Transistor

Anwendung: Getaktete Netzgeräte
Application: Switching mode power supply

Besondere Merkmale:

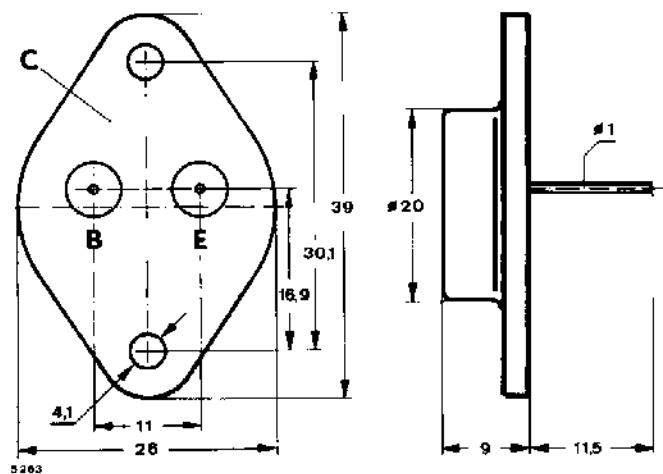
- In Dreifachdiffusions-Mesa-Technik
- Hohe Sperrspannung
- Kurze Schaltzeit
- Verlustleistung 86 W

Features:

- In triple diffusion mesa technique
- High reverse voltage
- Short switching time
- Power dissipation 86 W

Vorläufige technische Daten · Preliminary specifications

Abmessungen in mm
Dimensions in mm



Kollektor mit
Gehäuse verbunden
Collector connected
with case

Zubehör
Accessories

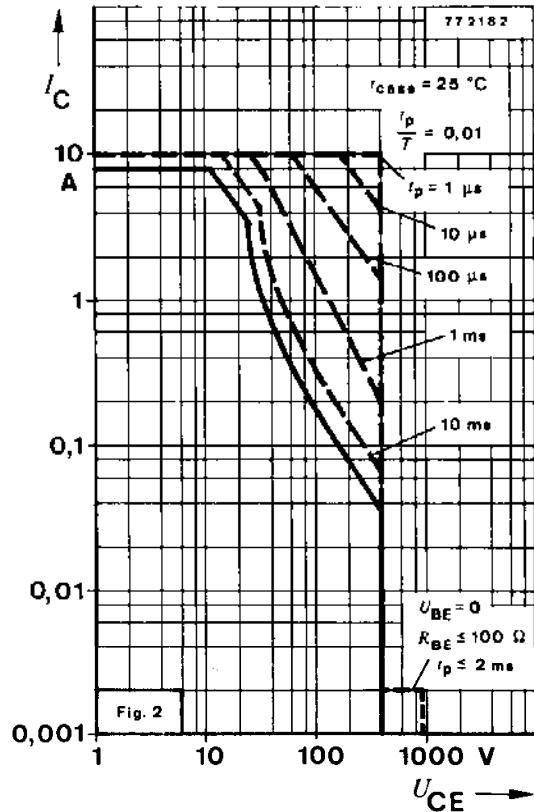
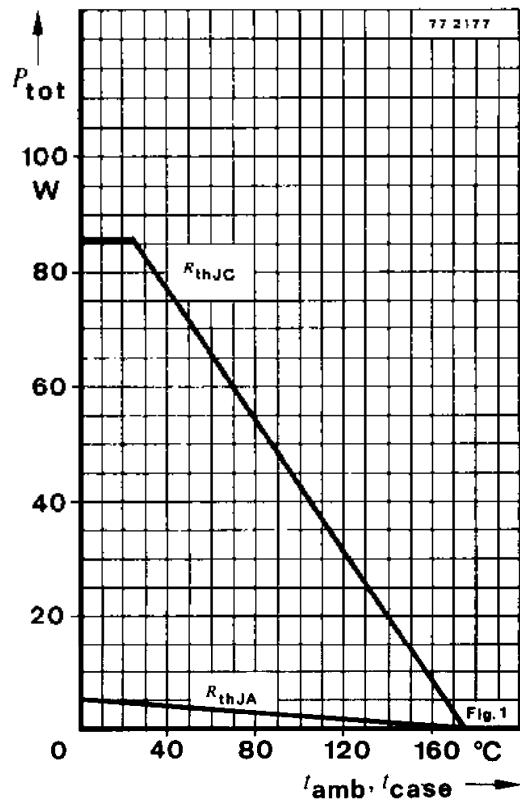
Isolierscheiben Best. Nr. 515 390
 Isolating washers Best. Nr. 562 897

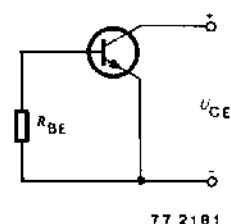
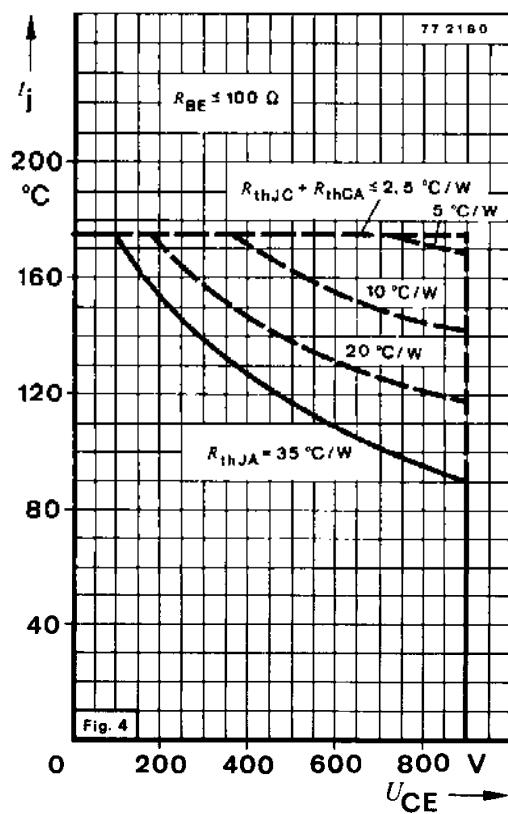
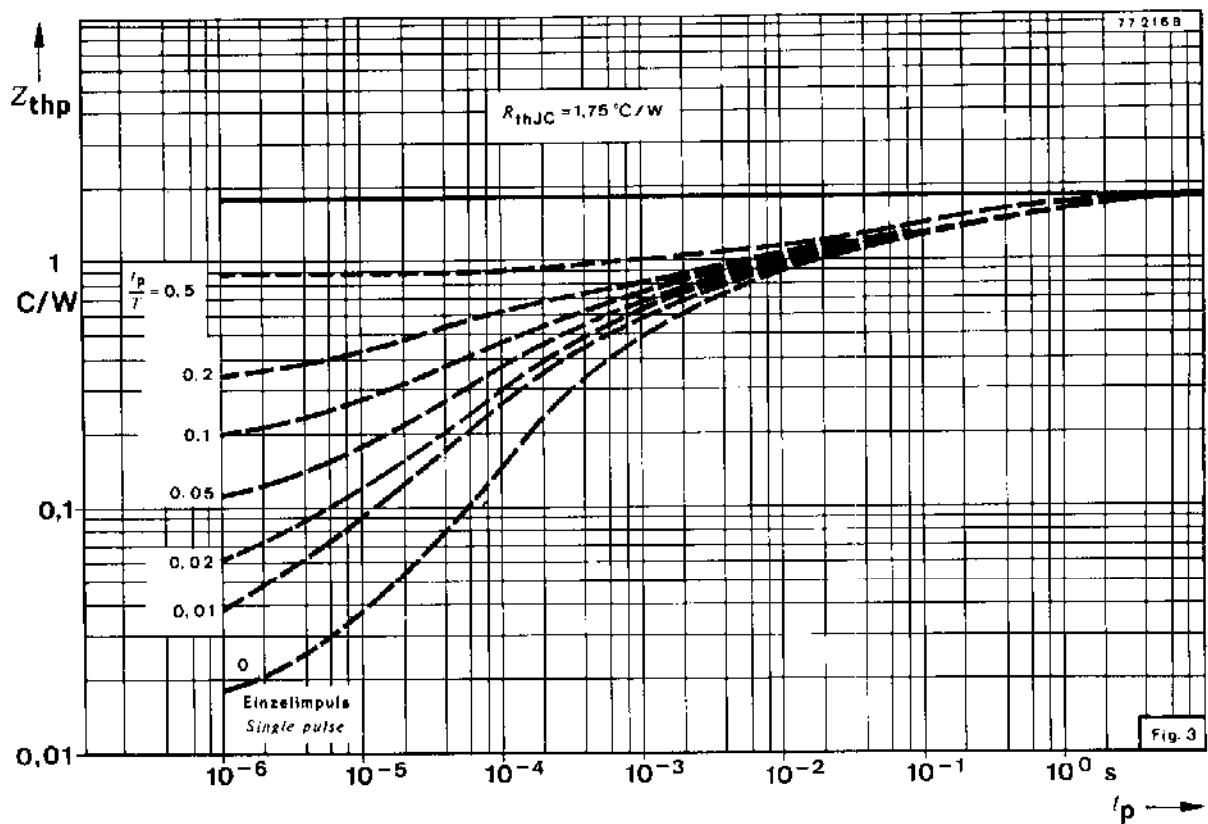
Normgehäuse
Case
3 B 2 DIN 41872
JEDEC TO 3
Gewicht · Weight
max. 20 g

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Absolute Grenzdaten Absolute maximum ratings

Kollektor-Emitter-Sperrspannung <i>Collector-emitter voltage</i>	U_{CEO}	400	V
$R_{BE} \leq 100 \Omega$	I_{CM}	10	A
Kollektorspitzenstrom <i>Collector peak current</i>	I_C	8	A
Kollektorstrom <i>Collector current</i>	I_{BM}	4	A
Basisstrom <i>Base current</i>	$-I_{BM}$	4	A
Gesamtverlustleistung <i>Total power dissipation</i>	P_{tot}	86	W
$t_{case} \leq 25^\circ\text{C}$	t_j	175	°C
Sperrsichttemperatur <i>Junction temperature</i>	t_{stg}	-65 ... +175	°C
Lagerungstemperaturbereich <i>Storage temperature range</i>			





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Fig. 5

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Wärmewiderstand Thermal resistance

		Min.	Typ.	Max.
Sperrsicht-Gehäuse Junction case	R_{thJC}			1,75 °C/W

Kenngrößen Characteristics

$t_{\text{case}} = 25^\circ\text{C}$, falls nicht anders angegeben
unless otherwise specified

Kollektorreststrom Collector cut-off current $I_C = 100 \text{ mA}, U_{\text{CE}} = 900 \text{ V}$ $t_j = 150^\circ\text{C}, U_{\text{CE}} = 900 \text{ V}$	Fig. 6	I_{CES}	1	mA
Kollektor-Emitter-Durchbruchspannung Collector-emitter breakdown voltage $I_C = 0,5 \text{ mA}, R_{\text{BE}} \leq 100 \Omega$	Fig. 6	I_{CES}	2	mA
Kollektor-Emitter-Durchbruchspannung Collector-emitter breakdown voltage $I_C = 100 \text{ mA}, L_C = 25 \text{ mH}, \frac{t_p}{T} \geq 0,01$		$U_{(\text{BR})\text{CEO}}$	400	V
		$U_{(\text{BR})\text{CER}}$	900	V
Emitter-Basis-Durchbruchspannung Emitter-base breakdown voltage $I_E = 1 \text{ mA}$		$U_{(\text{BR})\text{EBO}}$	6	V
Kollektor-Sättigungsspannung Collector saturation voltage $I_C = 8 \text{ A}, I_B = 3 \text{ A}$	Fig. 7	U_{CEsat}	5	V
Basis-Sättigungsspannung Base saturation voltage $I_C = 6 \text{ A}, I_B = 1,25 \text{ A}$		U_{BESat}	2	V
Kollektor-Basis-Gleichstromverhältnis DC forward current transfer ratio $U_{\text{CE}} = 5 \text{ V}, I_C = 1 \text{ A}$ $I_C = 4 \text{ A}$	Fig. 10	h_{FE}	15	
		h_{FE}	6	
Transitfrequenz Gain bandwidth product $U_{\text{CE}} = 10 \text{ V}, I_C = 500 \text{ mA}, f = 1 \text{ MHz}$		f_T	10	MHz

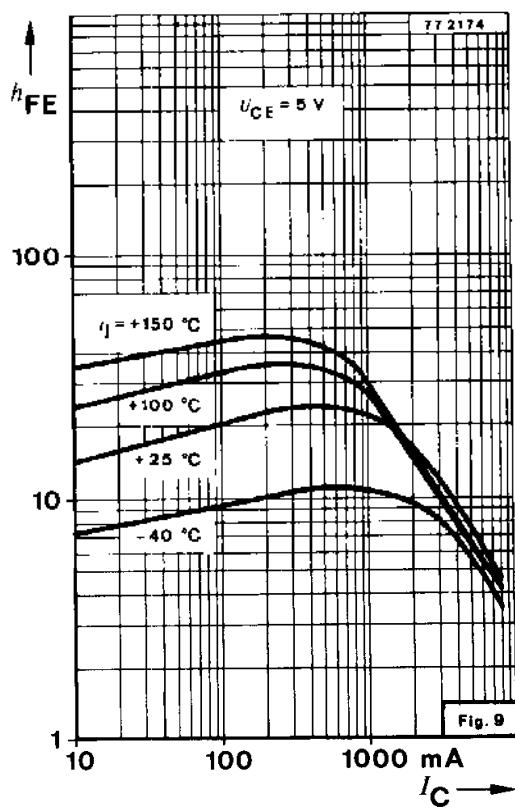
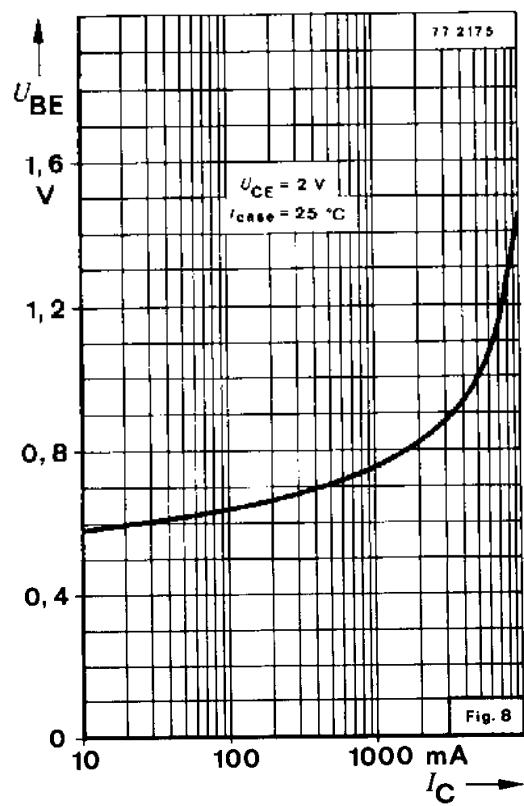
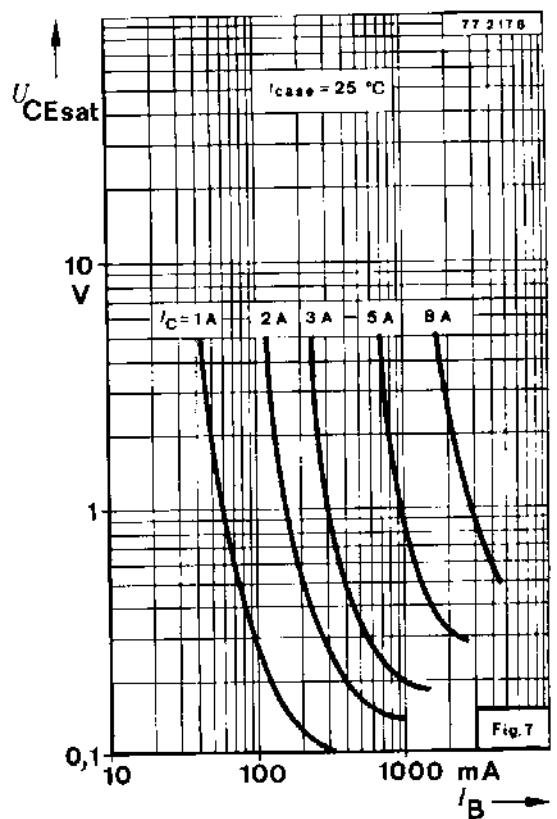
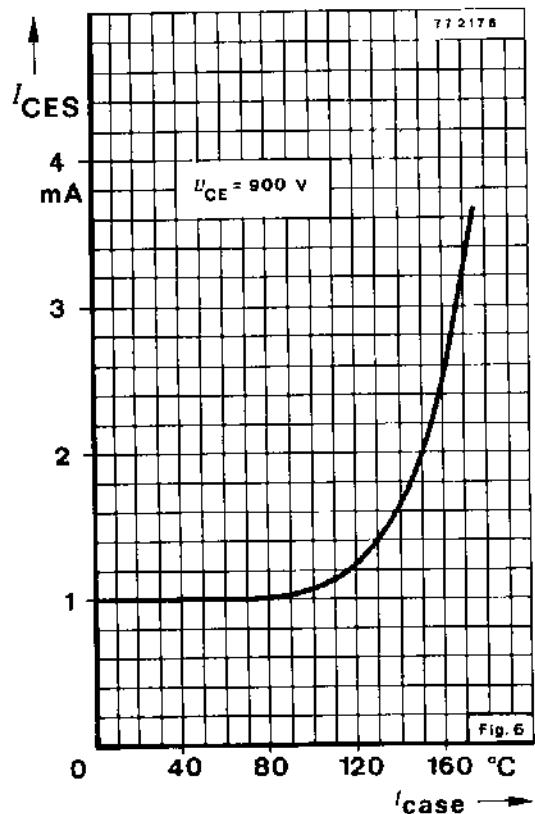
Schaltzeiten Switching characteristics

$$I_C = 4 \text{ A}, I_{B1} = -I_{B2} = 1,25 \text{ A}, t_p = 20 \mu\text{s}$$

Abfallzeit Fall time	t_f)	1	μs
Ausschaltzeit Turn-off time	t_{off}	4	μs

) Beim Abschalten induktiver Last unter Verwendung eines Rückschlagkondensators.
By using retrace capacitor at switching-off inductive load

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