

T-33-35

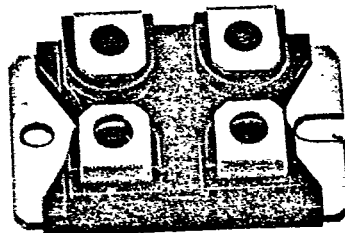
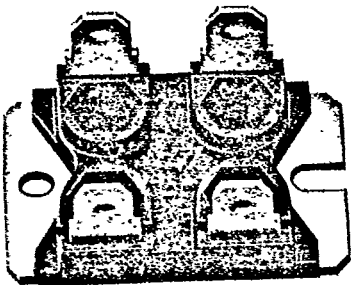
**NPN Silicon Tripleton Power Transistor**

- Applications:**
- Motor-control (380 V-mains)
  - UPS (Uninterruptible power supplies)
  - High power SMPS ( $\geq 1000$  W)
  - Battery chargers
  - Welding equipments
  - Inductive heating equipment

**Features:**

- High reverse voltage
- Short switching times
- Very fast C-E-free-wheel diode
- Base 1 and base 2 connectable
- Triple diffusion technique
- Glass passivation

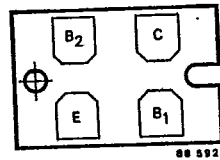
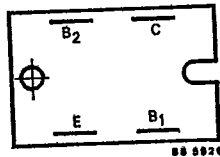
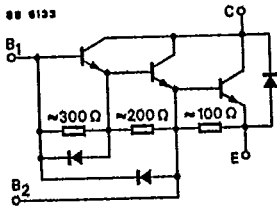
**Case variations**



TFK 3080 D

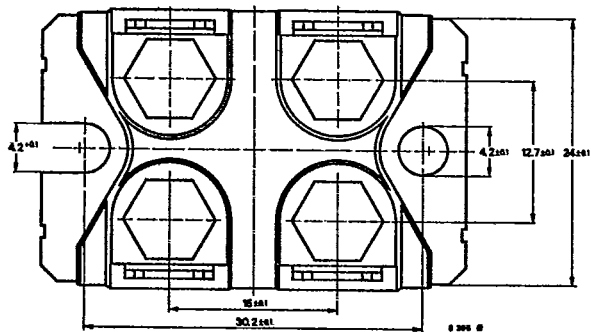
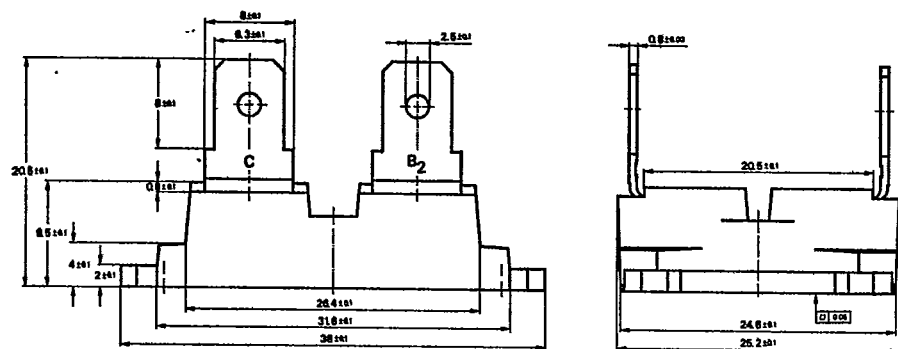
TFK 3080 DA

**Terminal connections**

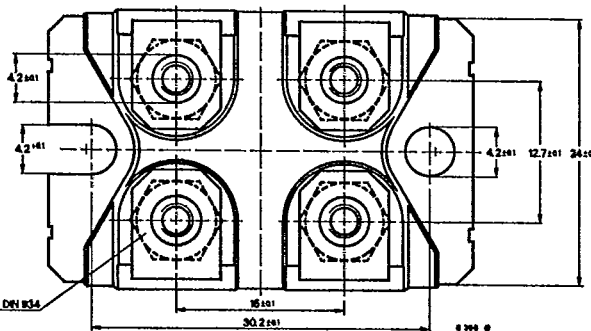
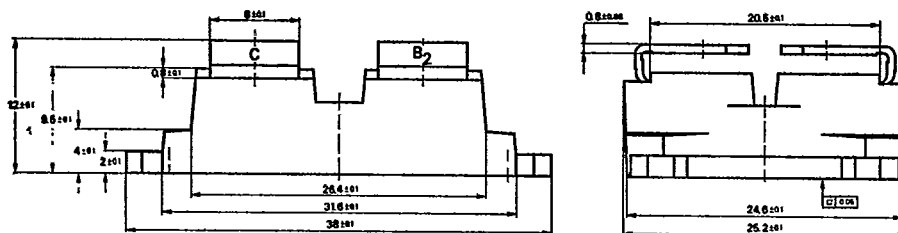


T1.2/1997.0888 E

Dimensions in mm



TFK 3080D



TFK 3080DA

Plastic case  
Weight max. 30.0 g

## TFK 3080 D

T-33-35

## Absolute maximum ratings

Collector-emitter voltage	$V_{CEO}$	1000	V
	$V_{CES}$	1000	V
Emitter-base voltage	$V_{EBO}$	8	V
Collector current	$I_C$	30	A
Collector peak current	$I_{CM}$	60	A
Base current	$I_B$	2	A
Base peak current	$I_{BM}$	4	A
Total power dissipation $T_{case} \leq 25^\circ\text{C}$	$P_{tot}$	275	W
Junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-40...+150	$^\circ\text{C}$
Insulation voltage	$V_{is}$	2500	V

## Maximum thermal resistances

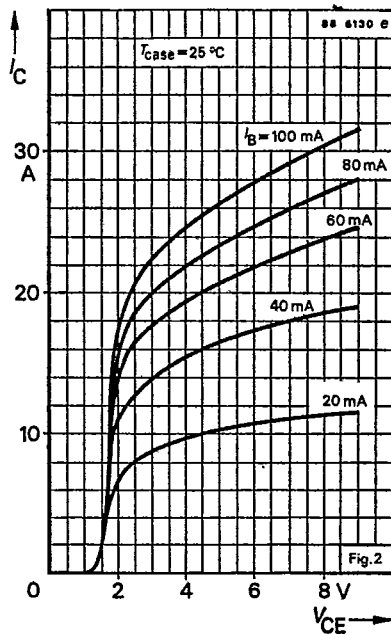
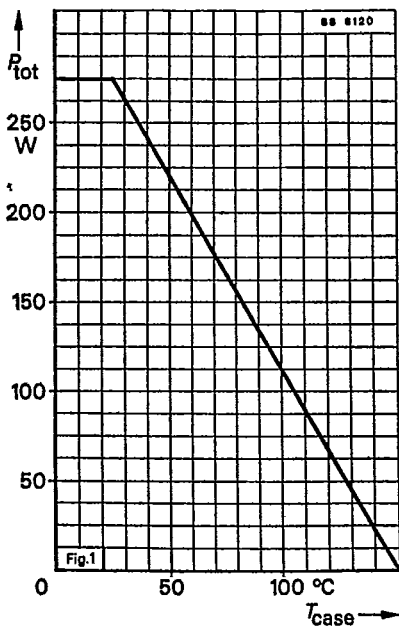
Junction case				
Power transistor	$R_{thJC}$	0.45	K/W	
Free-wheel diode	$R_{thJC}$	1.5	K/W	

## Characteristics

 $T_{case} = 25^\circ\text{C}$ , unless otherwise specified

		Min.	Typ.	Max.
Collector cut-off current $V_{CE} = 1000\text{ V}$ $V_{CE} = 1000\text{ V}$	$I_{CES}$ $I_{CED}$			1.0 mA 1.0 mA
Emitter cut-off current $V_{EB} = 8\text{ V}$	$I_{EBO}$			200 mA
Collector-emitter breakdown voltage $I_C = 1\text{ A}$ , $L = 125\text{ mH}$	$V_{(BR)CEO}$	1000		V
Emitter-base breakdown voltage $I_E = 0,5\text{ A}$	$V_{(BR)EBO}$	8		V
Collector saturation voltage $I_C = 30\text{ A}$ , $I_B = 0,6\text{ A}$	$V_{CEsat}$			2.5 V
Base saturation voltage $I_C = 30\text{ A}$ , $I_B = 0,6\text{ A}$	$V_{BEsat}$			3.5 V

	Min.	Typ.	Max.
Collector-emitter working voltage $I_{C\text{Woff}} = 48 \text{ A}, I_{B1} = 1.4 \text{ A}, -I_{B2} = 2 \text{ A}$	$V_{CEW}$	800	V
Forward voltage of the diode $I_F = 30 \text{ A}$	$V_F$		1.8 V
<b>Switching characteristics</b>			
Inductive load, $T_{\text{case}} = 100 \text{ }^\circ\text{C}$			
$I_C = 30 \text{ A}, I_{B1} = 0.6 \text{ A}, -I_{B2} = 2 \text{ A}$			
Storage time	$t_s$		15 $\mu\text{s}$
Fall time	$t_f$		3 $\mu\text{s}$



# TFK 3080 D

T-33-35

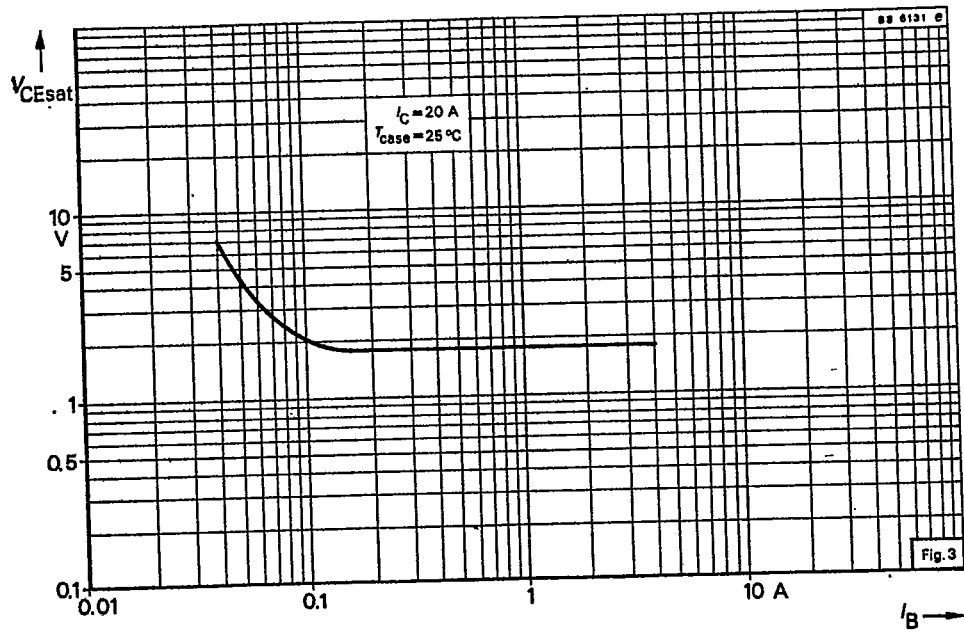


Fig.3

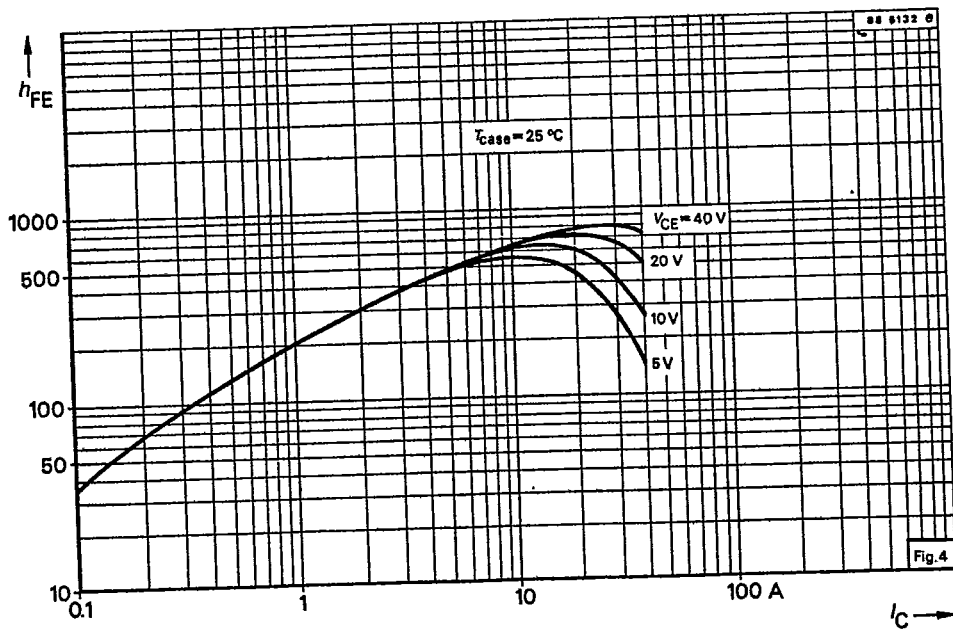


Fig.4

T-91-20

A E G CORP

● Family of curves

Besides the static (d. c.) and dynamic (a. c.) characteristics, family of curves are given for specified operating conditions. They show the typical interdependence of individual characteristics. Partly are given the scattering limits. They signify that at least 95% of the delivery lies inside these tolerances.

6.6. Additional informations

Preliminary specifications

This heading indicates that some information on the device concerned may be subject to slight changes.

Not for new developments

This heading indicates that the device concerned should not be used in equipment under development, it is, however, available for present production.

7. Taping and reeling

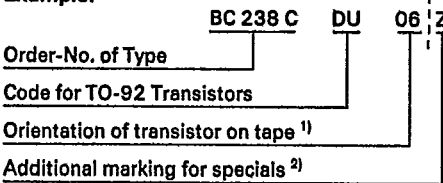
7.1. Taping of TO-92 transistors

Standard reeling: Taped on reel, reeled together with a paper film.

7.1.1. Order Numbers

Add the taping-code to the order number.

Example:



<sup>1)</sup> 06 = View on flat side of transistor, view on gummed tape

05 = View on round side of transistor, view on gummed tape

<sup>2)</sup> Additional marking "O":

Taping without paper film

Additional marking "Z":

Zigzag folded tape in special box. Marking for orientation of transistor not necessary, because box can be opened on top or bottom.

Example for order No.: BC 237 C DU Z

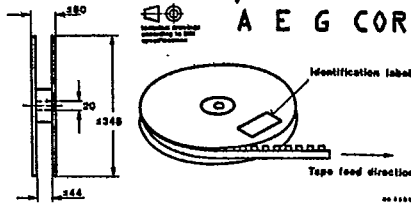


Fig. 7.1. Dimensions of reel in mm

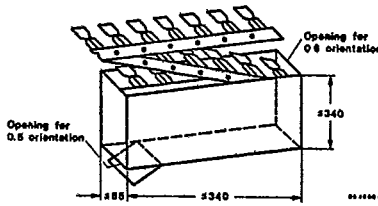


Fig. 7.2. Dimension of box for Zigzag folding in mm

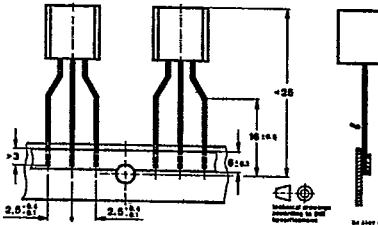


Fig. 7.3. Dimensions of tape in mm

7.1.2 Quantity of devices

1 000 devices per reel

2 000 devices per folded tape in special box.

7.2 Taped transistors in SOT 23 and SOT 143 case

a) Standard taping

Designation is attached with code GS 08 in case of standard taping. Example for normal version transistors as standard taped: BF 569-GS08.

Example for R-version transistors as standard taped: BF 569 R-GS 08.

In case of standard taping, the transistor orientation on the tape is shown in Fig. 7.4 and Fig. 7.5.

