

T-33-35

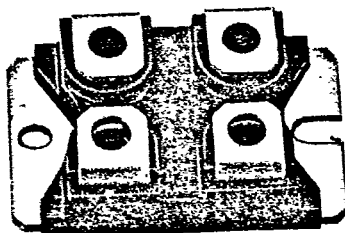
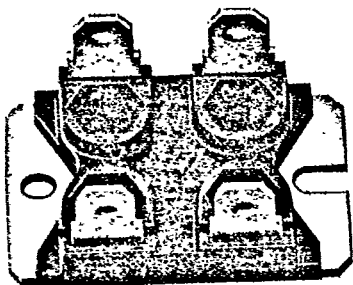
NPN Silicon Tripleton Power Transistor

- Applications:**
- Motor-control (380 V-mains)
 - UPS (Uninterruptible power supplies)
 - High power SMPS (≥ 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

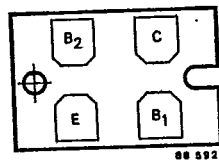
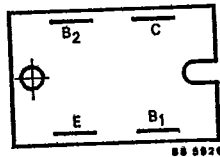
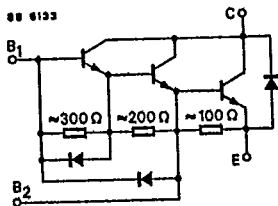
Case variations



TFK 3080 D

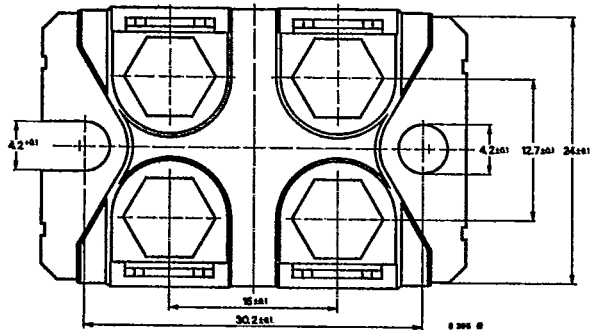
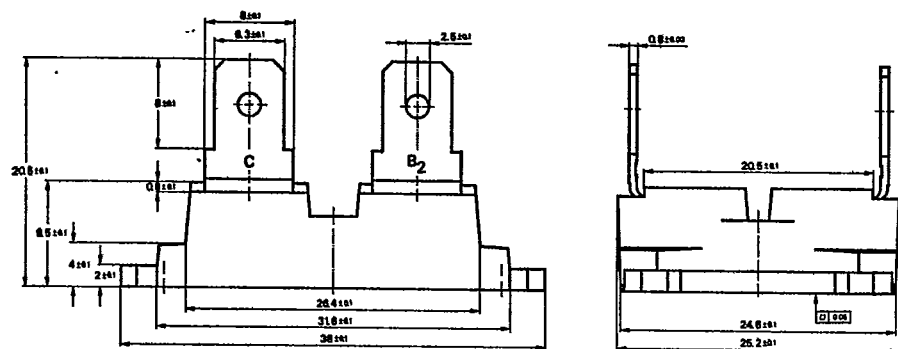
TFK 3080 DA

Terminal connections

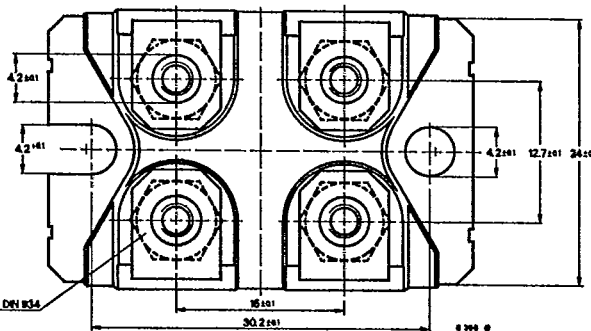
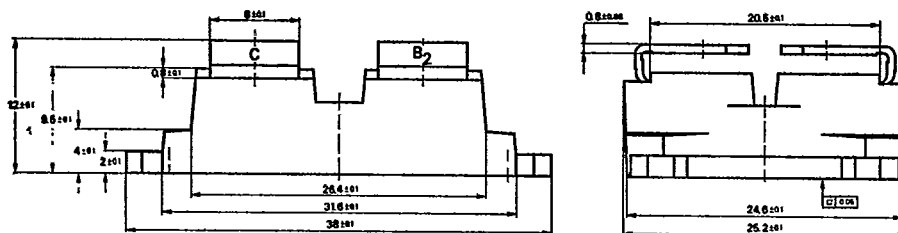


T1.2/1997.0888 E

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 $T_{case} \leq 25^\circ C$	P_{tot}	275	W
Junction temperature	T_J	150	$^\circ C$
Storage temperature range	T_{stg}	-40...+150	$^\circ C$
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

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

		Min.	Typ.	Max.
Collector cut-off current $V_{CE} = 1000 V$ $V_{CE} = 1000 V$	I_{CES} I_{CED}			1.0 mA 1.0 mA
Emitter cut-off current $V_{EB} = 8 V$	I_{EBO}			200 mA
Collector-emitter breakdown voltage $I_C = 1 A, L = 125 mH$	$V_{(BR)CEO}$	1000		V
Emitter-base breakdown voltage $I_E = 0,5 A$	$V_{(BR)EBO}$	8		V
Collector saturation voltage $I_C = 30 A, I_B = 0.6 A$	V_{CEsat}			2.5 V
Base saturation voltage $I_C = 30 A, I_B = 0.6 A$	V_{BEsat}			3.5 V

Collector-emitter working voltage
 $I_{C\text{Woff}} = 48 \text{ A}, I_{B1} = 1.4 \text{ A}, -I_{B2} = 2 \text{ A}$

Forward voltage of the diode
 $I_F = 30 \text{ A}$

Switching characteristics

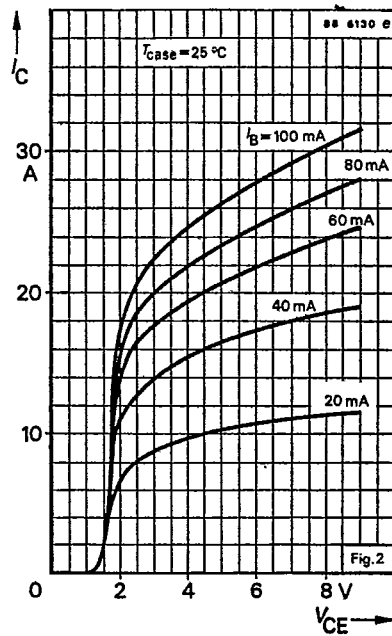
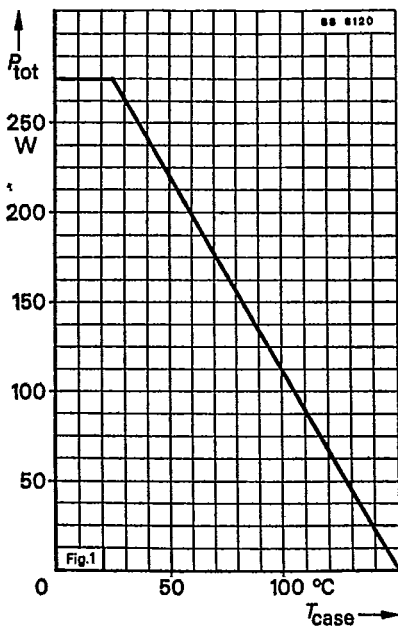
Inductive load, $T_{\text{case}} = 100 \text{ }^\circ\text{C}$

$I_C = 30 \text{ A}, I_{B1} = 0.6 \text{ A}, -I_{B2} = 2 \text{ A}$

Storage time

Fall time

	Min.	Typ.	Max.
V_{CEW}	800		V
V_F			1.8 V
t_s			15 μs
t_f			3 μs



TFK 3080 D

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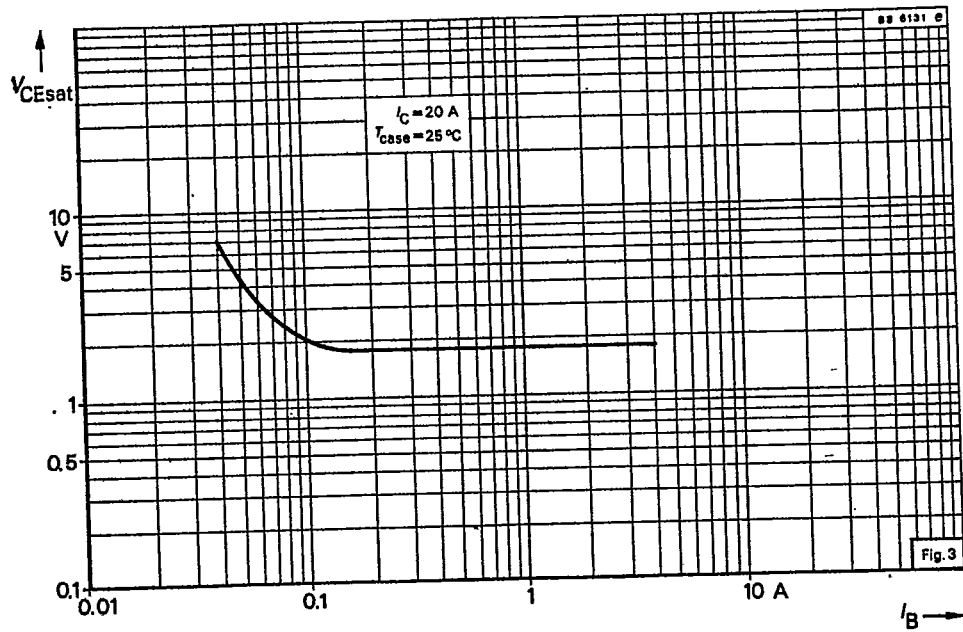


Fig.3

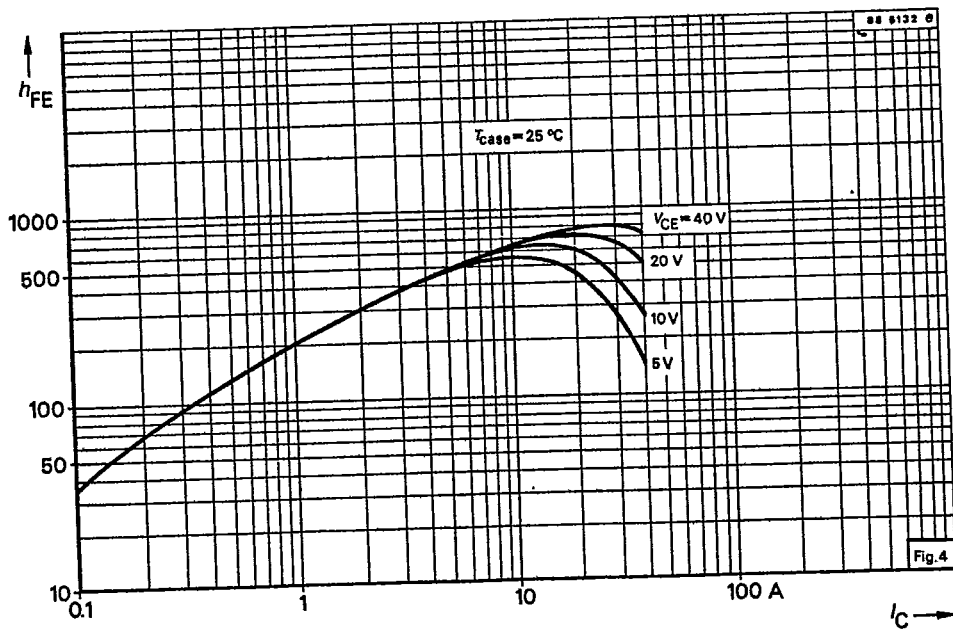


Fig.4

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

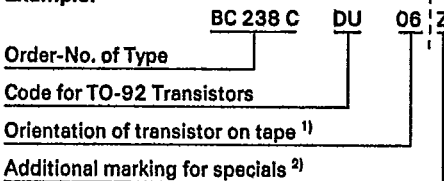
7.1. Taping of TO-92 transistors

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:



¹⁾ 06 = View on flat side of transistor, view on gummed tape

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

²⁾ 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

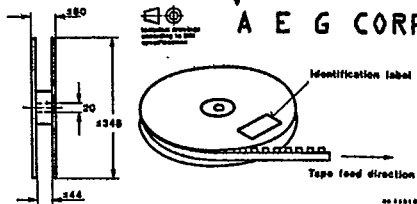


Fig. 7.1. Dimensions of reel in mm

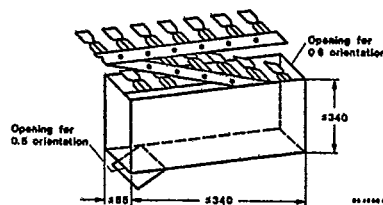


Fig. 7.2. Dimension of box for Zigzag folding in mm

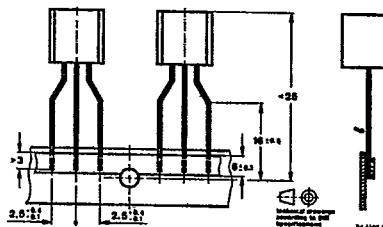


Fig. 7.3. Dimensions of tape in mm

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.

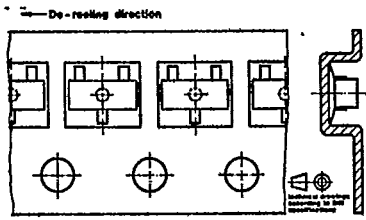


Fig. 7.4 Standard taped SOT 23

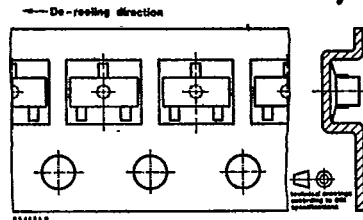


Fig. 7.6 Reverse taped SOT 23

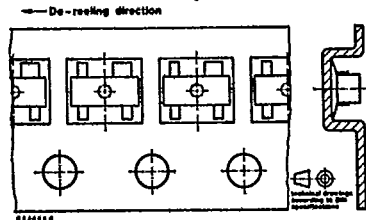


Fig. 7.5 Standard taped SOT 143

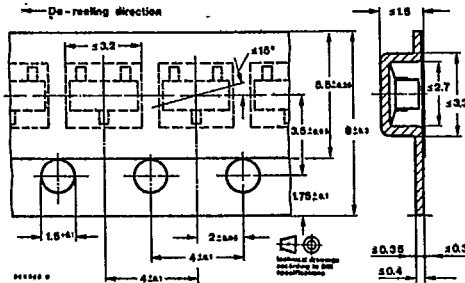


Fig. 7.7 Dimensions of tape in mm

b) Reverse taping

Designation is attached with code GS07 in case of reverse taping. Example for normal version transistors as reverse taped: BF 569 R-GS 07. Example for R-version transistors as reverse taping: BF 569 R-GS 07.

In case of reverse taping, the transistor orientation on the tape is shown in Fig. 6. Regarding MOF-FET and MES-FET devices, reverse taping is at present not available.

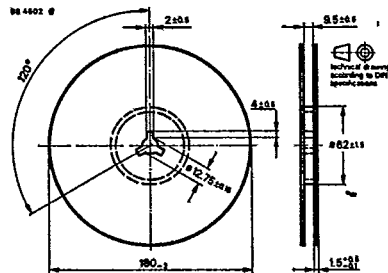


Fig. 7.8 Dimensions of reel in mm

8. Accessories

Number	Fig.	Designation	For case
119880	8.1.	Isolating washer thickness 60 μm	12A 3 DIN 41 869 JEDEC TO 126 (SOT 32)
564542	8.2.	Isolating washer thickness 50 μm	14A 3 DIN 41 869 JEDEC TO 220 (SOT 78)
912884	8.3	Isolating washer thickness 50 μm	15A 3 DIN 41 869 (TOP3) for clip mounting
191131	8.4	Isolating washer thickness 50 μm	15A 3 DIN 41 869 (TOP3) for screw mounting
191140	8.5	Mounting clip	15A 3 DIN 41 869 (TOP3)
569524	8.6	Isolating washer thickness 100 μm + 50 μm	3B 2 DIN 41 872 JEDEC TO 3 Devices with high reverse voltage