



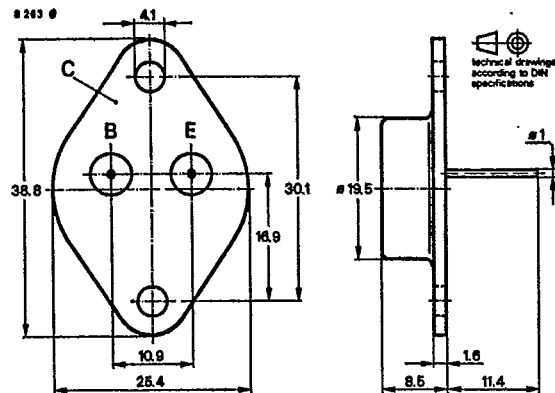
Silicon NPN Power Transistor

Applications: Switching mode power supply

Features:

- In triple diffusion technique
- High reverse voltage
- Short switching time
- Power dissipation 100 W

Dimensions in mm



Collector connected with case

Standard metal case
3 B 2 DIN 41872
JEDEC TO 3
Weight max. 20 g

Accessories

Isolating washer No. 569524

Absolute maximum ratings

Collector emitter voltage	V_{CEO}	550	V
	V_{CES}	1300	V
Collector peak current	I_{CM}	8	A
Collector current	I_C	6	A
Base peak current	I_{BM}	4	A
	$-I_{BM}$	4	A
Base current	I_B	2	A
Total power dissipation	P_{tot}	100	W
$T_{case} \leq 25^\circ C$			
Junction temperature	T_j	150	$^\circ C$
Storage temperature range	T_{stg}	-65 ... +150	$^\circ C$

Maximum thermal resistance

Junction case	R_{thJC}	1.25	K/W
---------------	------------	------	-----

T1.2/090.0888 E

Characteristics

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

Min. Typ. Max.

Collector cut-off current

$V_{CE} = 1300 V$

I_{CES}

1 mA

$T_j = 150^{\circ}C$, $V_{CE} = 1200 V$

I_{CES}

2 mA

Collector-emitter breakdown voltage

$I_C = 100 mA$, $L_C = 125 mH$

$V_{(BR)CEO}^{1)}$

550

V

Emitter-base breakdown voltage

$I_E = 1 mA$

$V_{(BR)EBO}$

6

V

Collector saturation voltage

$I_C = 6 A$, $I_B = 2 A$

$V_{CEsat}^{1)}$

1.8

V

Base saturation voltage

$I_C = 6 A$, $I_B = 2 A$

$V_{BEsat}^{1)}$

2

V

DC forward current transfer ratio

$V_{CE} = 2 V$, $I_C = 3.2 A$

h_{FE}

6

$V_{CE} = 5 V$, $I_C = 1.5 A$

h_{FE}

8

$V_{CE} = 5 V$, $I_C = 10 mA$

h_{FE}

6

$V_{CE} = 3 V$, $I_C = 4 A$

h_{FE}

5.5

Gain bandwidth product

$V_{CE} = 10 V$, $I_C = 500 mA$, $f = 1 MHz$

f_T

10

MHz

Switching characteristics

$I_{Cend} = 3.2 A$, $I_{Band} = 0.7 A$

Fall time

t_f

0.5

μs

¹⁾ $\frac{t_p}{T} \geq 0.01$, $t_p = 0.1 ms$

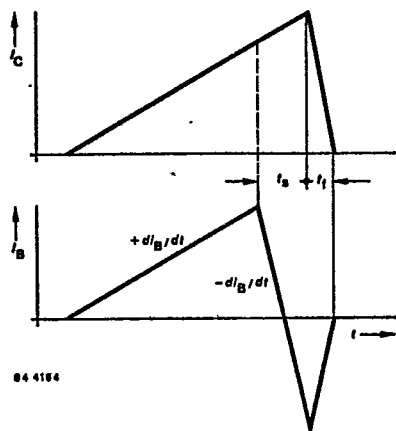
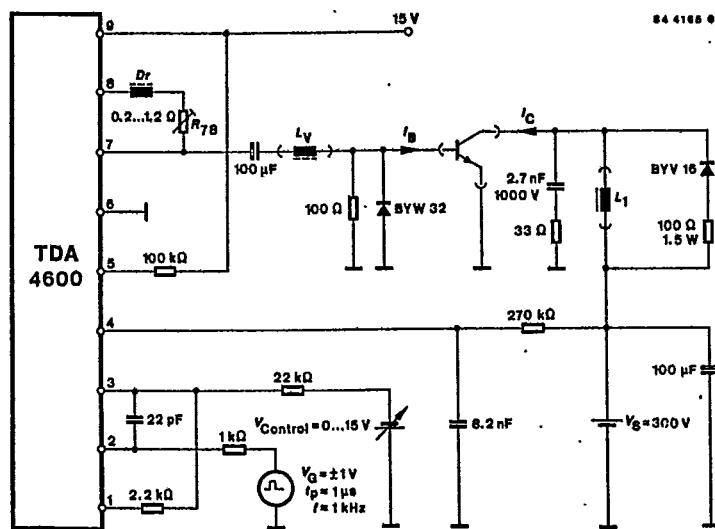
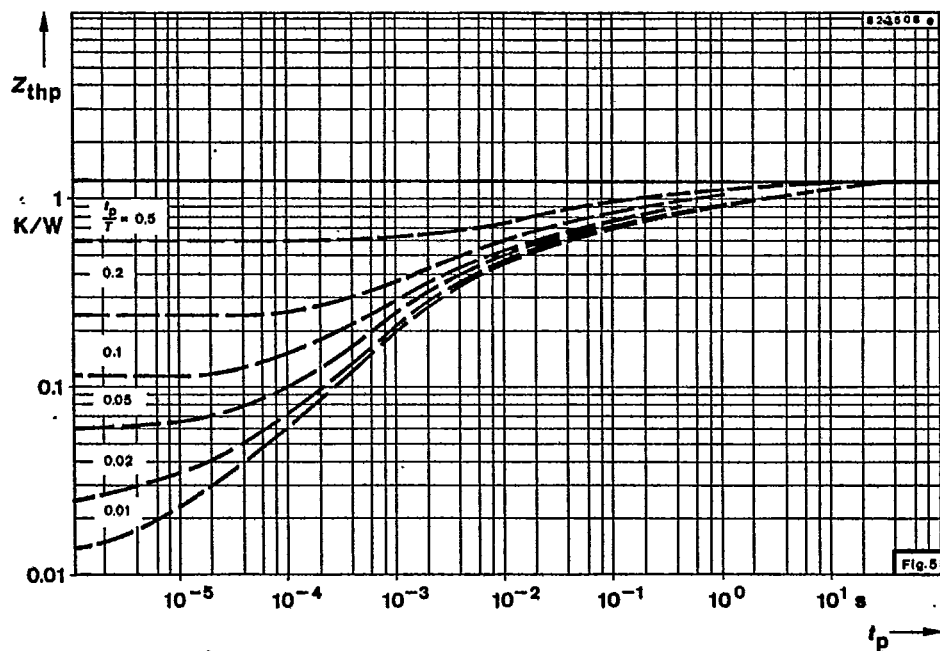
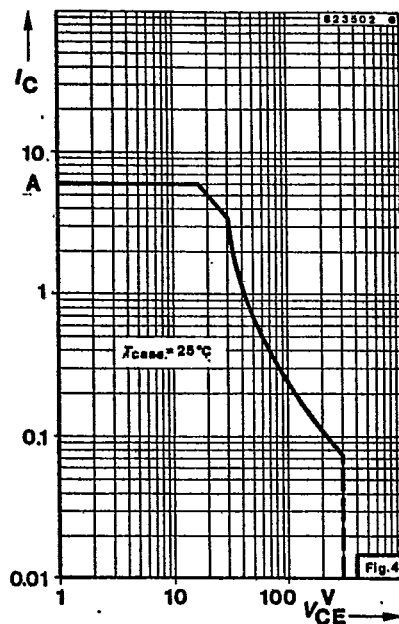
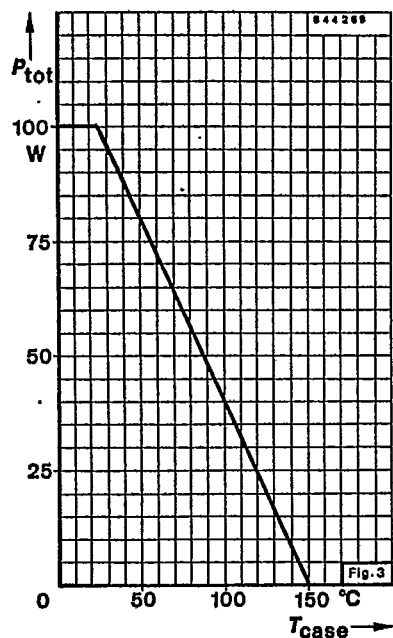
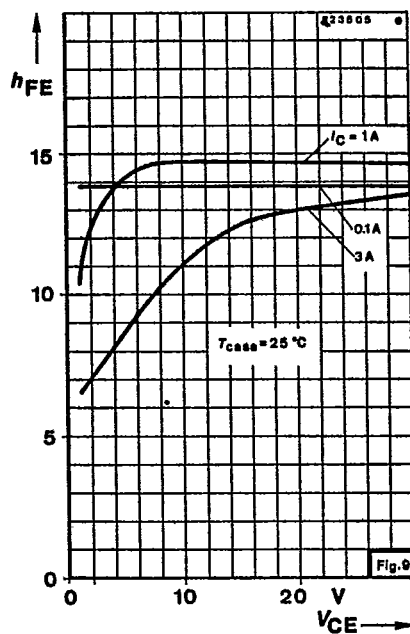
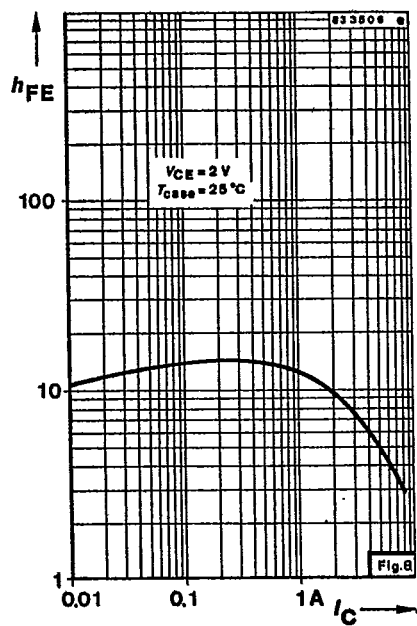
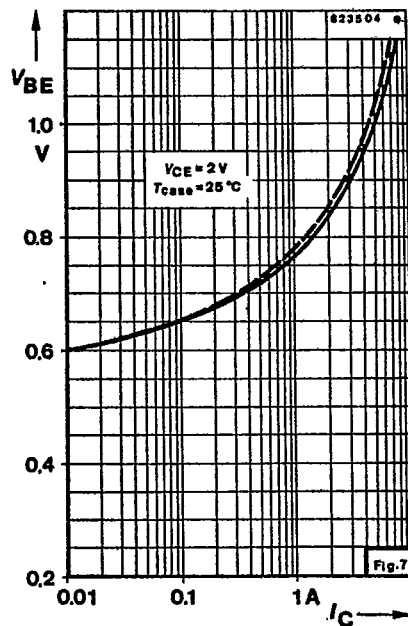
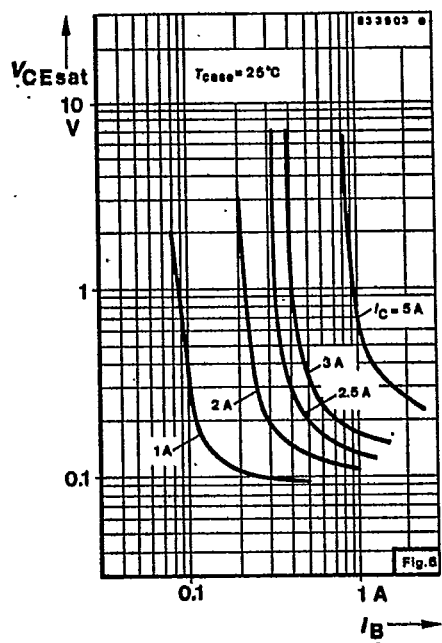


Fig. 1 Pulse diagram

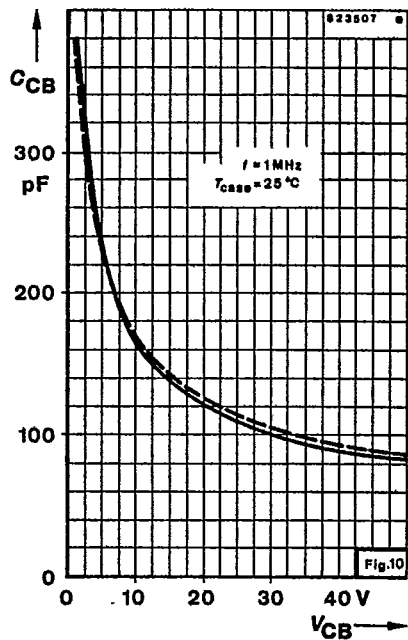
Fig. 2 Test circuit for: t_f





BU 546

T-33-13



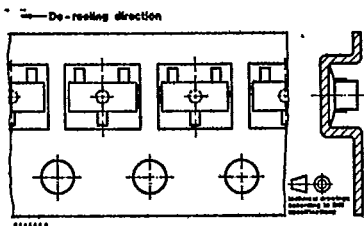


Fig. 7.4 Standard taped SOT 23

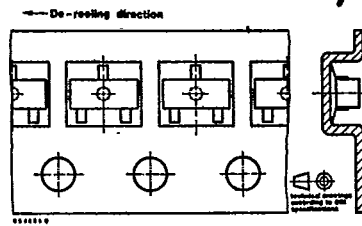


Fig. 7.6 Reverse taped SOT 23

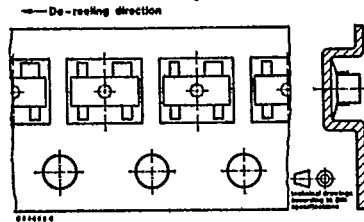


Fig. 7.5 Standard taped SOT 143

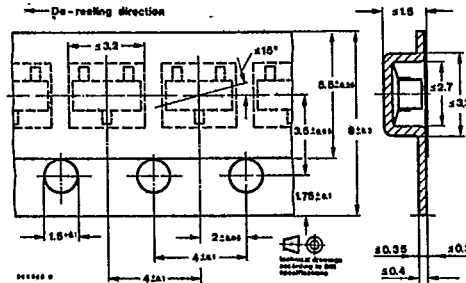


Fig. 7.7 Dimensions of tape in mm

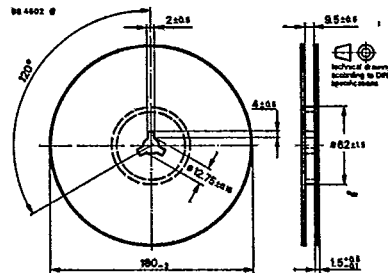


Fig. 7.8 Dimensions of reel in mm

8. Assessories

Number	Fig.	Designation	For case
119 880	8.1.	Isolating washer thickness 80 µm	12 A 3 DIN 41 869 JEDEC TO 126 (SOT 32)
564 542	8.2.	Isolating washer thickness 50 µm	14 A 3 DIN 41 869 JEDEC TO 220 (SOT 78)
912 884	8.3	Isolating washer thickness 50 µm	15 A 3 DIN 41 869 (TOP3) for clip mounting
191 131	8.4	Isolating washer thickness 50 µm	15 A 3 DIN 41 869 (TOP3) for screw mounting
191 140	8.5	Mounting clip	15 A 3 DIN 41 869 (TOP3)
569 524	8.6	Isolating washer thickness 100 µm + 50 µm	3B 2 DIN 41 872 JEDEC TO 3 Devices with high reverse voltage