

Silicon NPN Power Transistors

2SD985 2SD986

DESCRIPTION

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- With TO-126 package
- Complement to type 2SB794/795
- DARLINGTON
- High DC current gain
- Low collector saturation voltage

APPLICATIONS

- For low frequency power amplifier and power switching applications

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base

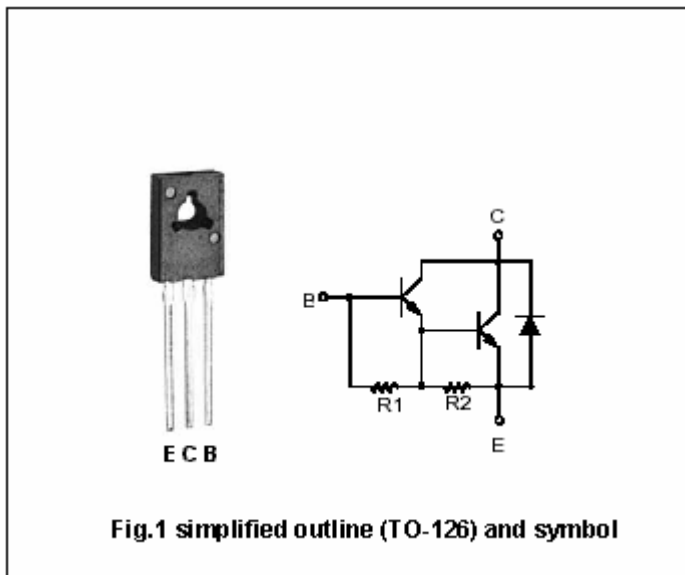


Fig.1 simplified outline (TO-126) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	150	V
V _{CEO}	Collector-emitter voltage	2SD985	60	V
		2SD986	80	
V _{EBO}	Emitter -base voltage	Open collector	8	V
I _C	Collector current		±1.5	A
I _{CM}	Collector current-Peak		±3.0	A
I _B	Base current		0.15	A
P _T	Total power dissipation	T _a =25°C	1.0	W
		T _C =25°C	10	
T _J	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

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 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEsat}	Collector-emitter saturation voltage	$I_C=1.0A; I_B=1.0mA$			1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=1.0A; I_B=1.0mA$			2.0	V
I_{CBO}	Collector cut-off current	2SD985			10	μA
		2SD986				
I_{EBO}	Emitter cut-off current	$V_{EB}=5V; I_C=0$			2.0	mA
h_{FE-1}	DC current gain	$I_C=0.5A; V_{CE}=2V$	1000			
h_{FE-2}	DC current gain	$I_C=1.0A; V_{CE}=2V$	2000		30000	

Switching times

t_{on}	Turn-on time	$I_C=1.0A; I_{B1}=-I_{B2}=1.0mA$ $V_{CC}=50V; R_L=50\Omega$		0.5		μs
t_s	Storage time			1.0		μs
t_f	Fall time			1.0		μs

◆ h_{FE-2} Classifications

M	L	K
2000-5000	4000-10000	8000-30000

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PACKAGE OUTLINE

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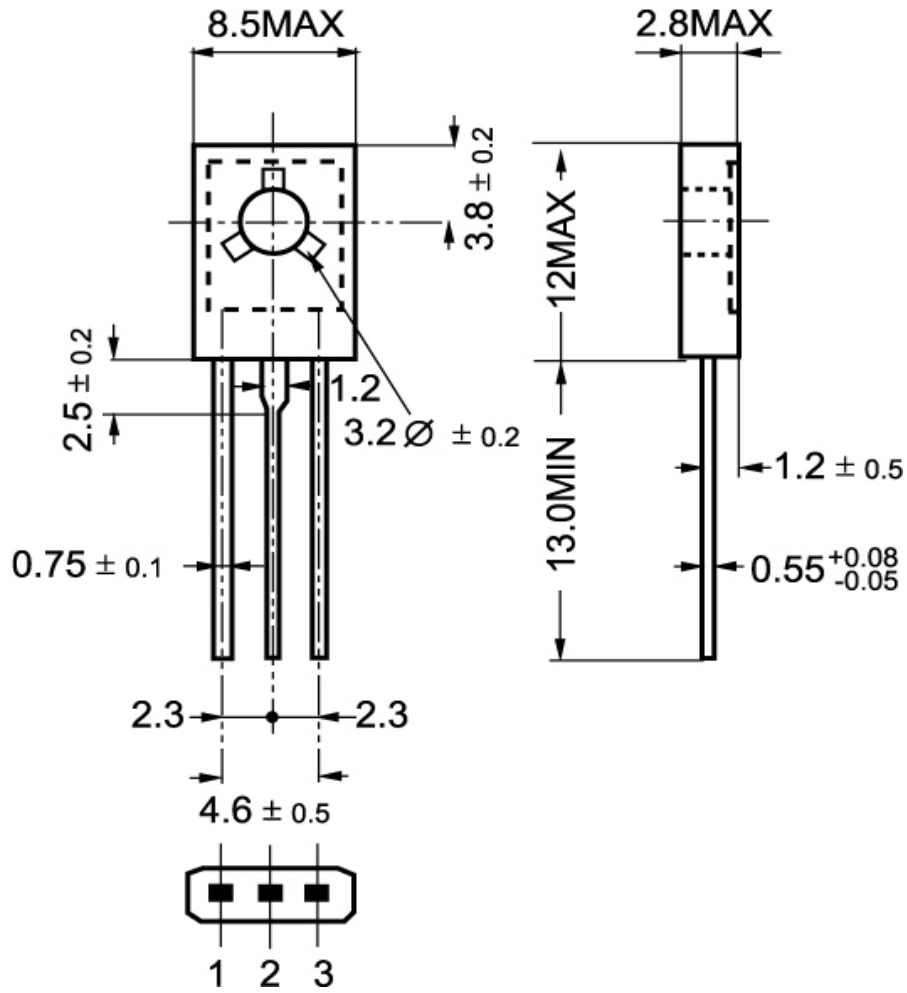


Fig.2 Outline dimensions