

Silicon NPN Power Transistors

2SD1985 2SD1985A

DESCRIPTION

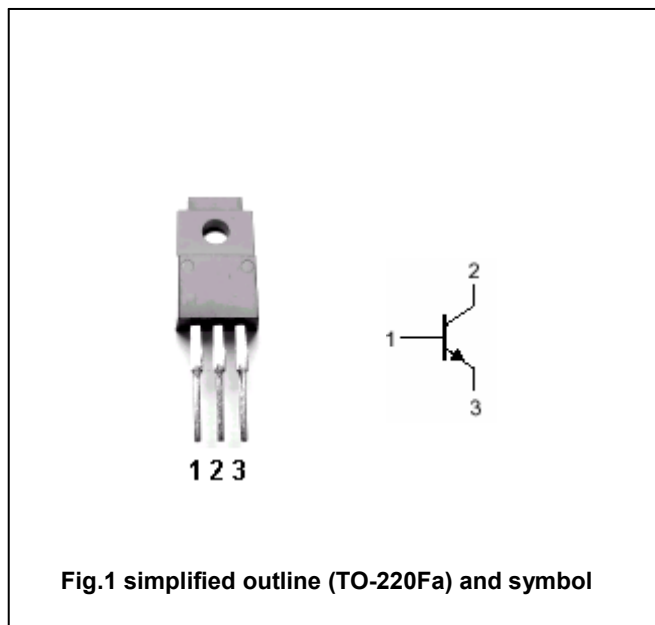
- With TO-220Fa package
- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector saturation voltage
- Complement to type 2SB1393 /1393A

APPLICATIONS

- For power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CB0}	Collector-base voltage	2SD1985	60	V
		2SD1985A	80	
V _{CEO}	Collector-emitter voltage	2SD1985	60	V
		2SD1985A	80	
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current (DC)		3	A
I _{CM}	Collector current-peak		5	A
P _C	Collector power dissipation	T _C =25°C	25	W
		T _a =25°C	2	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

www.datasheet4u.com

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEO}	Collector-emitter breakdown voltage	2SD1985	$I_C=30\text{mA}$, $I_B=0$	60			V
		2SD1985A		80			
V_{CEsat}	Collector-emitter saturation voltage		$I_C=3\text{A}$; $I_B=0.375\text{A}$			1.2	V
V_{BE}	Base-emitter voltage		$V_{CE}=4\text{V}$; $I_C=3\text{A}$			1.8	V
I_{CES}	Collector cut-off current	2SD1985	$V_{CE}=60\text{V}$; $I_B=0$			200	μA
		2SD1985A	$V_{CE}=80\text{V}$; $I_B=0$				
I_{CEO}	Collector cut-off current	2SD1985	$V_{CE}=30\text{V}$; $I_B=0$			300	μA
		2SD1985A	$V_{CE}=60\text{V}$; $I_B=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=6\text{V}$; $I_C=0$			1	mA
h_{FE-1}	DC current gain		$I_C=1\text{A}$; $V_{CE}=4\text{V}$	70		250	
h_{FE-2}	DC current gain		$I_C=3\text{A}$; $V_{CE}=4\text{V}$	10			
f_T	Transition frequency		$I_C=0.5\text{A}$; $V_{CE}=5\text{V}$; $f=10\text{MHz}$		30		MHz

Switching times

t_{on}	Turn-on time	$I_C=1\text{A}$; $I_{B1}=0.1\text{A}$ $I_{B2}=-0.1\text{A}$; $V_{CC}=50\text{V}$		0.5		μs
t_s	Storage time			2.5		μs
t_f	Fall time			0.4		μs

◆ h_{FE-1} Classifications

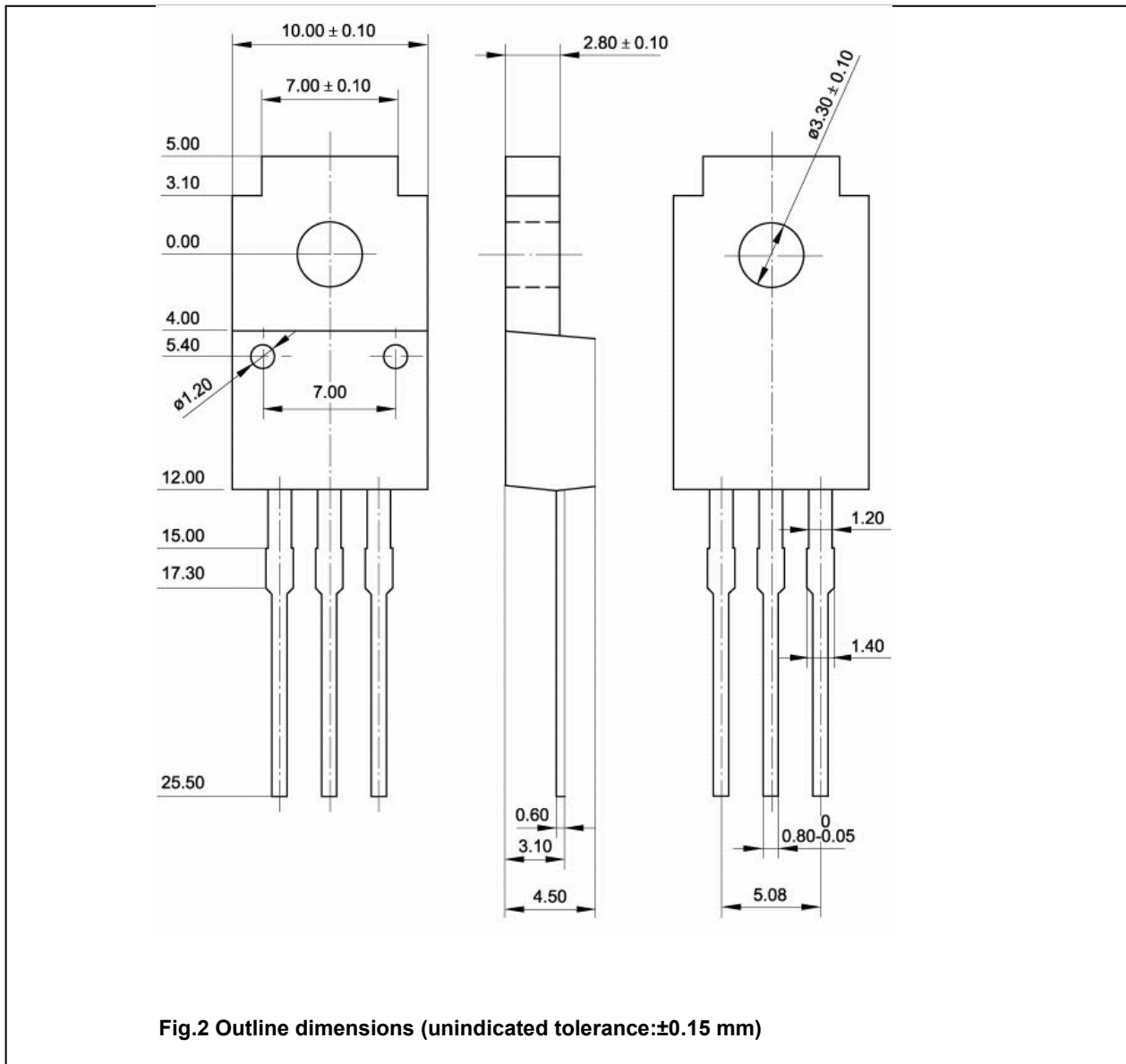
Q	P
70-150	120-250

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PACKAGE OUTLINE

www.datasheet4u.com



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