

Silicon NPN Power Transistors

2SD1565

DESCRIPTION

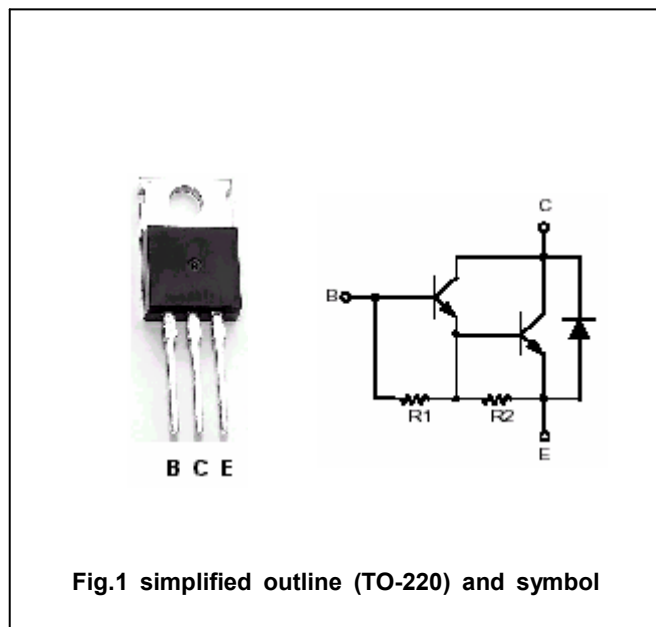
- With TO-220 package
- High DC current gain
- DARLINGTON
- Complement type 2SB1087

APPLICATIONS

- For low frequency power amplifier and power switching applications

PINNING

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

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		0.5	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	30	W
		$T_a=25^\circ\text{C}$	1.5	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SD1565

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1A$; $I_B=0$	100			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=2A$; $I_B=2mA$			1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=2A$; $I_B=2mA$			2.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=100V$; $I_E=0$			1.0	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V$; $I_C=0$			5.0	mA
h_{FE-1}	DC current gain	$I_C=2A$; $V_{CE}=2V$	2000		20000	
h_{FE-2}	DC current gain	$I_C=4A$; $V_{CE}=2V$	500			

Switching times

t_{on}	Turn-on time	$I_C=2A$; $I_{B1}=-I_{B2}=2mA$ $R_L=25\Omega$; $V_{CC}\approx 50V$		1.0		μs
t_s	Storage time			3.5		μs
t_f	Fall time			1.2		μs

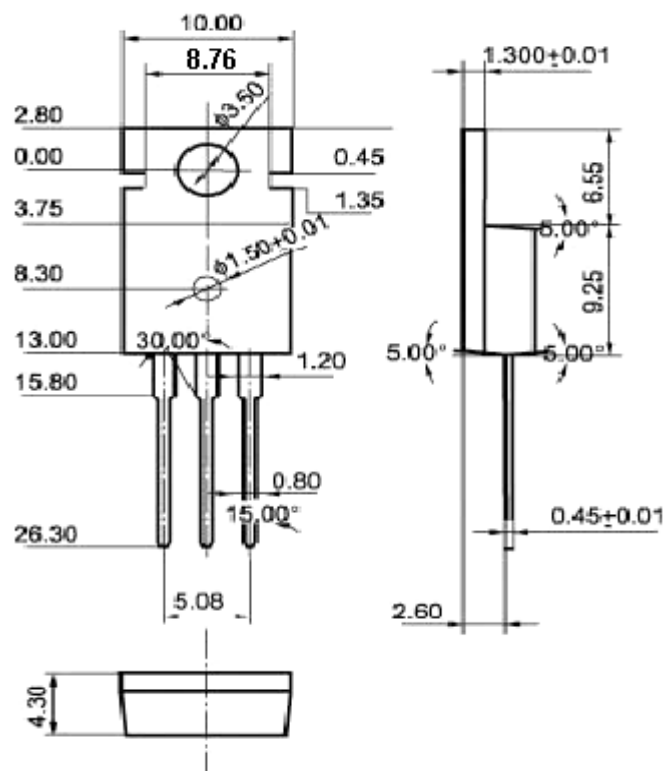
◆ h_{FE-1} classifications

M	L	K
2000-5000	4000-10000	8000-20000

Silicon NPN Power Transistors

2SD1565

PACKAGE OUTLINE

Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)