

Silicon NPN Power Transistors

2SD1535

DESCRIPTION

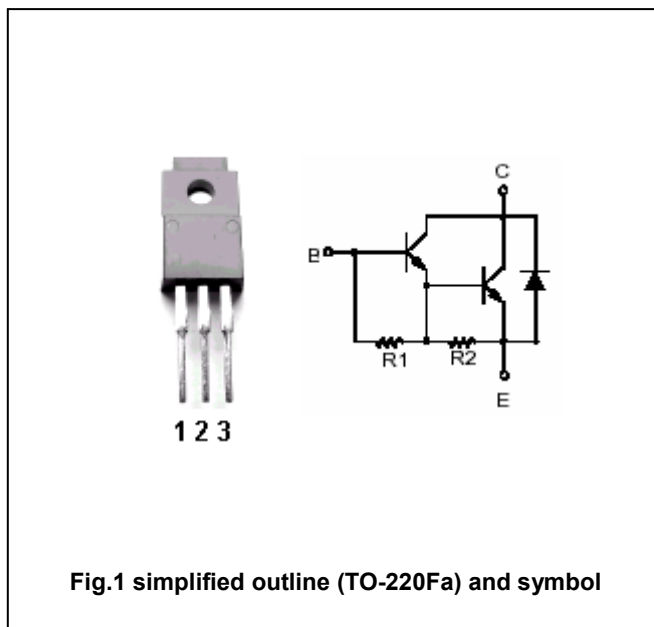
- With TO-220Fa package
- Wide area of safe operation
- High breakdown voltage
- DARLINGTON

APPLICATIONS

- For high power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector -emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	12	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		14	A
I_B	Base current		0.5	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	50	W
		$T_a=25^\circ\text{C}$	2.0	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SD1535

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1A$; $R_{BZ}=\infty$, $L=25mH$	400			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=7A$; $I_B=70mA$			2.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=7A$; $I_B=70mA$			2.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=500V$; $I_E=0$			0.1	mA
I_{CEO}	Collector cut-off current	$V_{CE}=400V$; $I_B=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=12V$; $I_C=0$			100	mA
h_{FE-1}	DC current gain	$I_C=2A$; $V_{CE}=2V$	500			
h_{FE-2}	DC current gain	$I_C=6A$; $V_{CE}=2V$	200			
f_T	Transition frequency	$I_C=0.5A$; $V_{CE}=10V$; $f=1MHz$		20		MHz

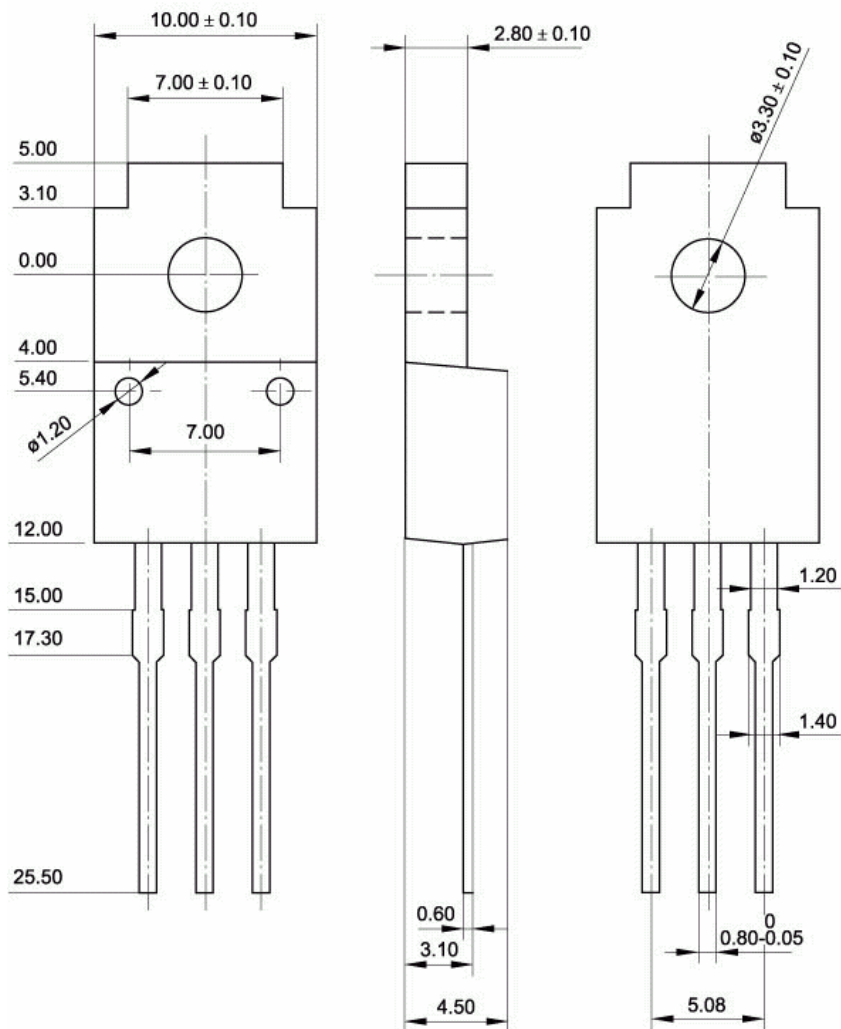
Switching times

t_{on}	Turn-on time	$I_C=7A$; $I_{B1}=-I_{B2}=70mA$ $V_{CC}=300V$		1.5		μs
t_{stg}	Storage time			5.0		μs
t_f	Fall time			6.5		μs

Silicon NPN Power Transistors

2SD1535

PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)