Silicon NPN Power Transistors 2SD633 2SD635

DESCRIPTION

- With TO-220C package
- Complement to type 2SB673/675
- DARLINGTON
- High DC current gain
- Low saturation voltage

APPLICATIONS

- High power switching
- Hammer drive,pulse motor drive

PINNING

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

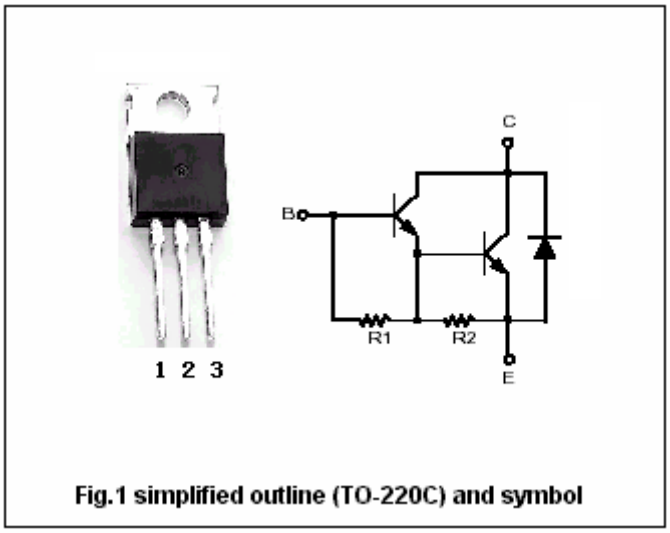

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD633	Open emitter	100	V
		2SD635		60	
V_{CEO}	Collector-emitter voltage	2SD633	Open base	100	V
		2SD635		60	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			7	A
I_B	Base current			0.7	A
P_C	Collector dissipation		T_C=25℃	40	W
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-50~150	℃

CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD633	I_C=50mA; I_B=0	100			V
		2SD635		60			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=3A; I_B=6mA			1.5	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=7A; I_B=14mA			2.0	V
V_{BEsat}	Base-emitter saturation voltage		I_C=3A; I_B=6mA			2.5	V
I_{CBO}	Collector cut-off current	2SD633	V_{CB}=100V; I_E=0			100	μA
		2SD635	V_{CB}=60V; I_E=0				
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			3.0	mA
h_{FE-1}	DC current gain		I_C=3A ; V_{CE}=3V	2000		15000	
h_{FE-2}	DC current gain		I_C=7A ; V_{CE}=3V	1000			

Switching times

t_{on}	Turn-on time	I_{B1}=-I_{B2}=6mA V_{CC}=45V;R_L=15Ω		0.8		μs
t_s	Storage time			3.0		μs
t_f	Fall time			2.5		μs

PACKAGE OUTLINE

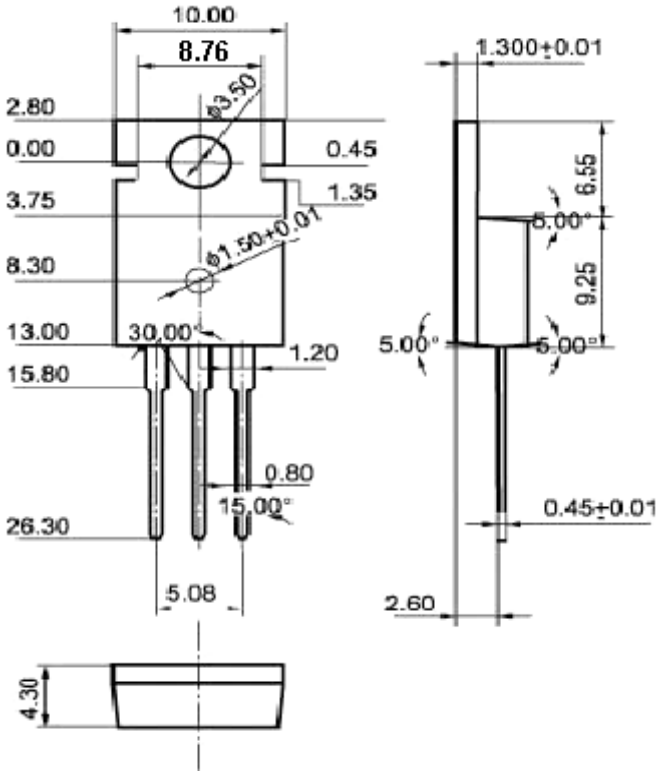

Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)