

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD633 2SD635

DESCRIPTION

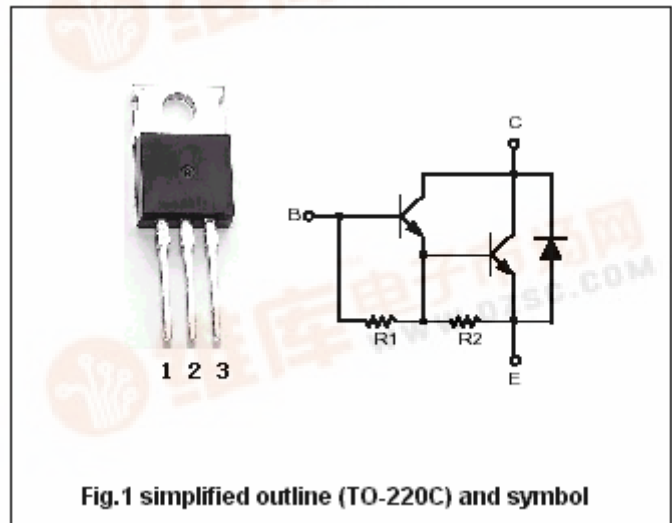
- With TO-220C package
- Complement to type 2SB673/675
- DARLINGTON
- High DC current gain
- Low saturation voltage

APPLICATIONS

- High power switching
- Hammer drive,pulse motor drive

PINNING

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

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

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		$T_c=25^{\circ}\text{C}$	40	W
T_j	Junction temperature			150	$^{\circ}\text{C}$
T_{stg}	Storage temperature			-50~150	$^{\circ}\text{C}$

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CHARACTERISTICS

T_j=25°C 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	μ A
		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			

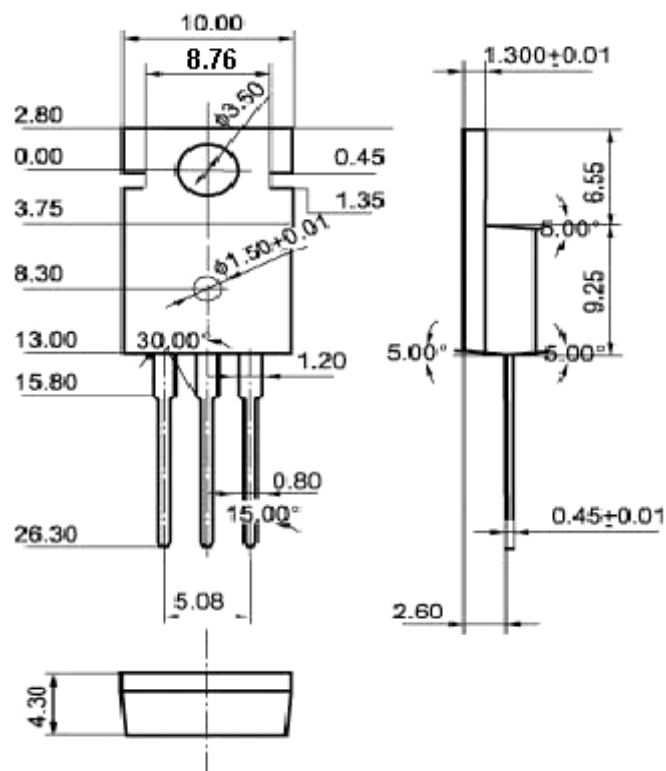
Switching times

t _{on}	Turn-on time	I _{B1} =-I _{B2} =6mA V _{CC} =45V; R _L =15 Ω		0.8		μ s
t _s	Storage time			3.0		μ s
t _f	Fall time			2.5		μ s

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)