

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SC1985 2SC1986

DESCRIPTION

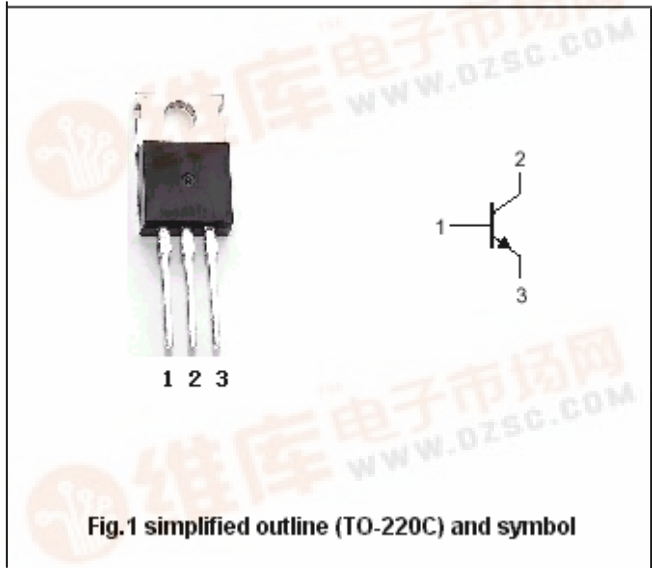
- With TO-220 package
- Complement to type 2SA770/771
- Low collector saturation voltage

APPLICATIONS

- For general and industrial purpose 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	2SC1985	Open emitter	80	V
		2SC1986		100	
V_{CEO}	Collector-emitter voltage	2SC1985	Open base	60	V
		2SC1986		80	
V_{EBO}	Emitter-base voltage		Open collector	6	V
I_C	Collector current			6	A
I_B	Base current			3	A
P_C	Collector power dissipation		$T_C=25^{\circ}\text{C}$	40	W
T_j	Junction temperature			150	$^{\circ}\text{C}$
T_{stg}	Storage temperature			-55~150	$^{\circ}\text{C}$

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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	2SC1985	I _C =25mA, I _B =0	60			V
		2SC1986		80			
V _{CEsat}	Collector-emitter saturation voltage		I _C =3A; I _B =0.3A			1.0	V
I _{CBO}	Collector cut-off current	2SC1985	V _{CB} =80V; I _E =0			1.0	mA
		2SC1986	V _{CB} =100V; I _E =0				
I _{EBO}	Emitter cut-off current		V _{EB} =6V; I _C =0			1.0	mA
h _{FE}	DC current gain		I _C =1A; V _{CE} =4V	40			
f _T	Transition frequency		I _C =0.5A; V _{CE} =12V		10		MHz

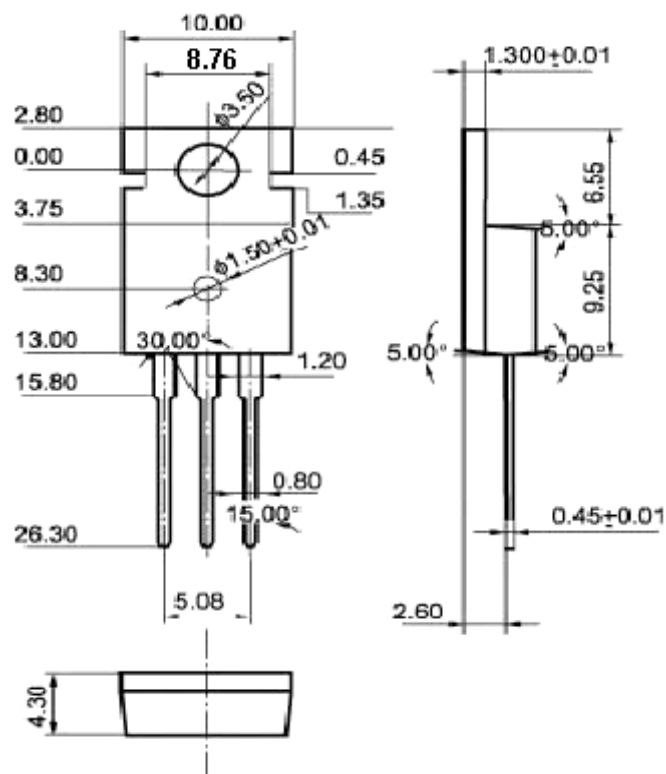
Switching times

t _r	Rise time	I _C =3A; V _{CC} =9V I _{B1} =-I _{B2} =0.3A; R _L =3 Ω		1.1		μ s
t _{stg}	Storage time			1.8		μ s
t _f	Fall time			0.55		μ s

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PACKAGE OUTLINE

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