

Silicon NPN Power Transistors

2SC1398 2SC1398A

DESCRIPTION

- With TO-220 package
- 2SC1398 is complement to type 2SA748
- Large collector power dissipation

APPLICATIONS

- For medium power amplifier applications

PINNING

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

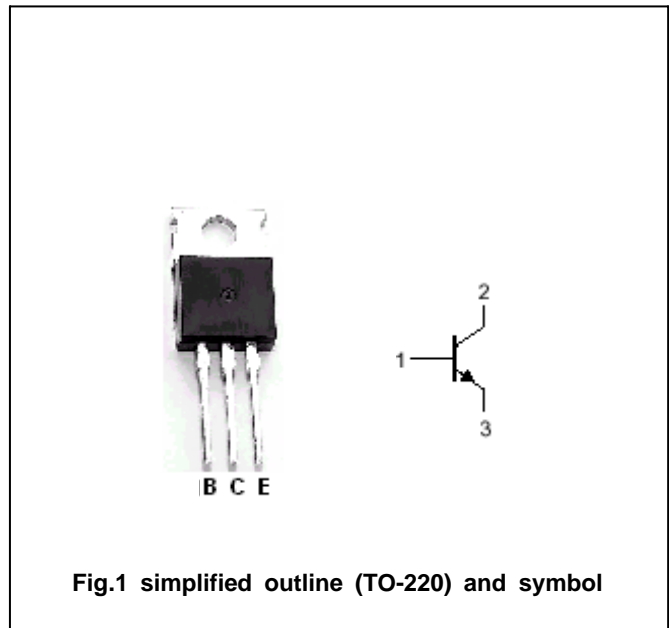


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	70	V
V_{CEO}	Collector-emitter voltage	2SC1398	50	V
		2SC1398A	70	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		2	A
I_{CM}	Collector current-peak		3	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	15	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	2SC1398	I _C =10mA, I _B =0	50			V
		2SC1398A		70			
V _{(BR)CBO}	Collector-base breakdown voltage		I _C =1mA, I _E =0	70			V
V _{CEsat}	Collector-emitter saturation voltage		I _C =1A; I _B =0.1A		0.6	1.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =2A; I _B =0.2A		1.0	1.5	V
I _{CBO}	Collector cut-off current		V _{CB} =40V; I _E =0			1	μ A
I _{CEO}	Collector cut-off current		V _{CE} =20V; I _C =0			100	μ A
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			100	μ A
h _{FE-1}	DC current gain		I _C =0.1A; V _{CE} =5V	30			
h _{FE-2}	DC current gain	2SC1398	I _C =1A; V _{CE} =5V	50		220	
		2SC1398A		50		160	
f _T	Transition frequency		I _C =0.5A; V _{CE} =5V		120		MHz

◆ h_{FE-2} Classifications

Type No.	P	Q	R
2SC1398	50-100	80-160	120-220
2SC1398A	50-100	80-160	

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PACKAGE OUTLINE

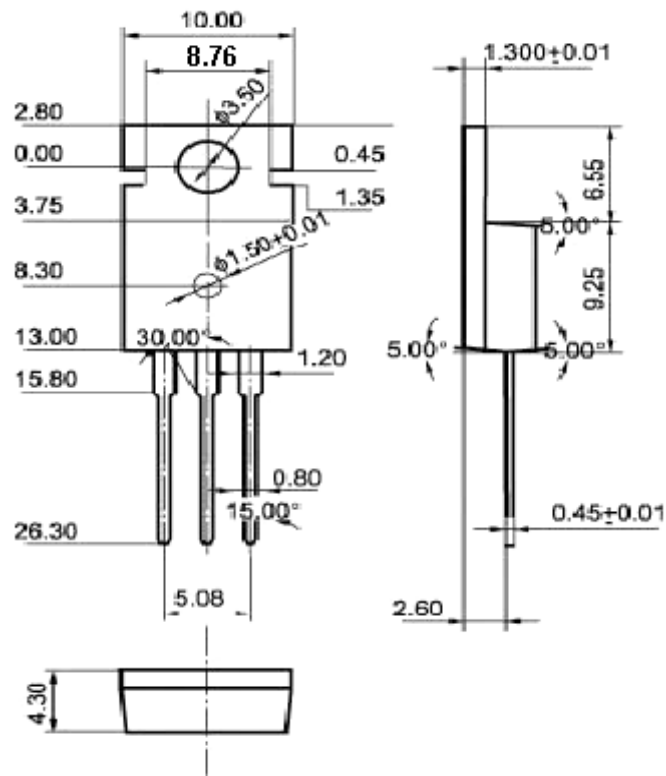


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)