Silicon NPN Power Transistors 2SC3157

DESCRIPTION

·With TO-220 package
·High switching speed
·Low collector saturation voltage
·Complement to type 2SA1261

APPLICATIONS

·For high voltage ,high speed and power switching applications

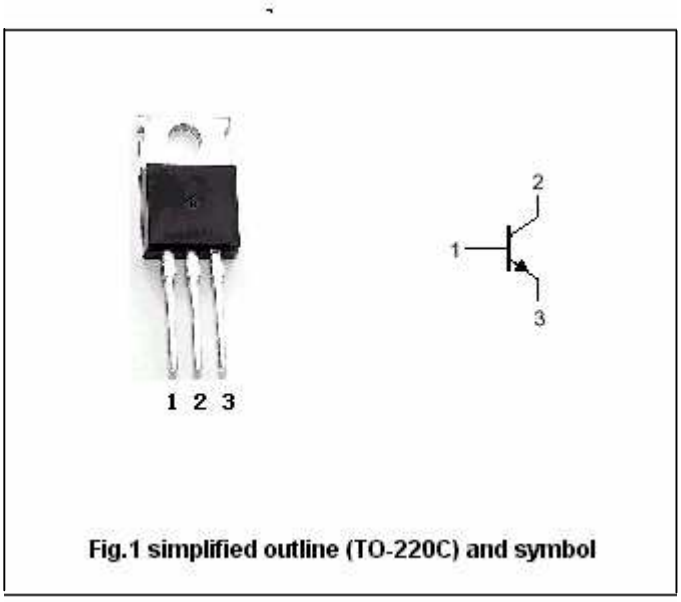

Fig.1 simplified outline (TO-220C) and symbol

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		10	A
I_{CM}	Collector current-Peak		20	A
I_B	Base current		3.5	A
P_T	Total power dissipation	T_a=25	1.5	W
		T_C=25	60	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=5A ;I_{B1}=0.5A;L=1mH	100			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=5A; I_B=0.5A			0.6	V
V_{BEsat}	Base-emitter saturation voltage	I_C=5A; I_B=0.5A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=100V; I_E=0			0.01	mA
I_{CEX}	Collector cut-off current	V_{CE}=100V; V_{BE}=1.5V Ta=125			0.01 1.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			0.01	mA
h_{FE-1}	DC current gain	I_C=0.5A ; V_{CE}=5V	40			
h_{FE-2}	DC current gain	I_C=3A ; V_{CE}=5V	40		200	
h_{FE-3}	DC current gain	I_C=5A ; V_{CE}=5V	20			
Switching times						
t_{on}	Turn-on time	I_C=5A;I_{B1}=-I_{B2}=0.5A , R_L=10Ω;V_{CC}≈50V			0.5	μs
t_s	Storage time				1.5	μs
t_f	Fall time				0.5	μs

◆ **h_{FE-2} classifications**

M	L	K
40-80	60-120	100-200

PACKAGE OUTLINE

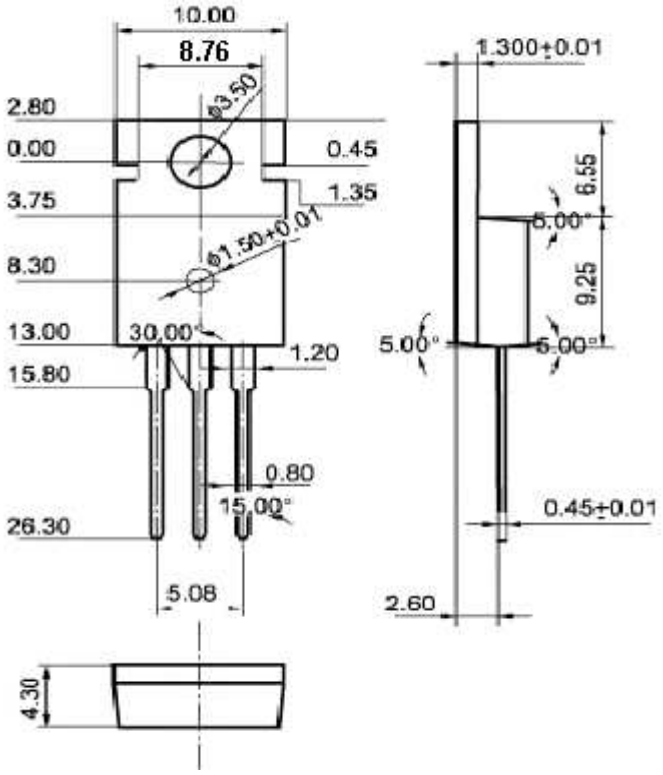

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)