Silicon NPN Power Transistors 2SC2552

DESCRIPTION

- With TO-220C package
- High collector breakdown voltage
  : V_{CEO}=400V(Min)
- Excellent switching time
  : t_r=1.0μs(Max.)
  : t_f=1.0μs(Max.@I_C=0.8A

APPLICATIONS

- Switching regulator and high voltage switching applications
- High speed DC-DC converter applications

PINNING

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

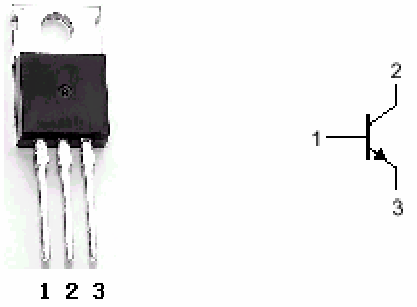

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		2	A
I_B	Base current		0.5	A
P_C	Collector dissipation	T_a=25□	1.5	W
		T_C=25□	20	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ; I_B=0	400			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA ; I_E=0	500			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=1A; I_B=0.2A			1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=1A; I_B=0.2A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=400V ;I_E=0			100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			1	mA
h_{FE-1}	DC current gain	I_C=0.1A ; V_{CE}=5V	20			
h_{FE-2}	DC current gain	I_C=1A ; V_{CE}=5V	8			

Switching times

t_r	Rise time	V_{CC}≈200V; I_C=0.8A I_{B1}=-I_{B2}=0.08A;R_L=250Ω Duty cycle≤1%			1.0	μs
t_{stg}	Storage time				2.5	μs
t_f	Fall time				1.0	μs

PACKAGE OUTLINE

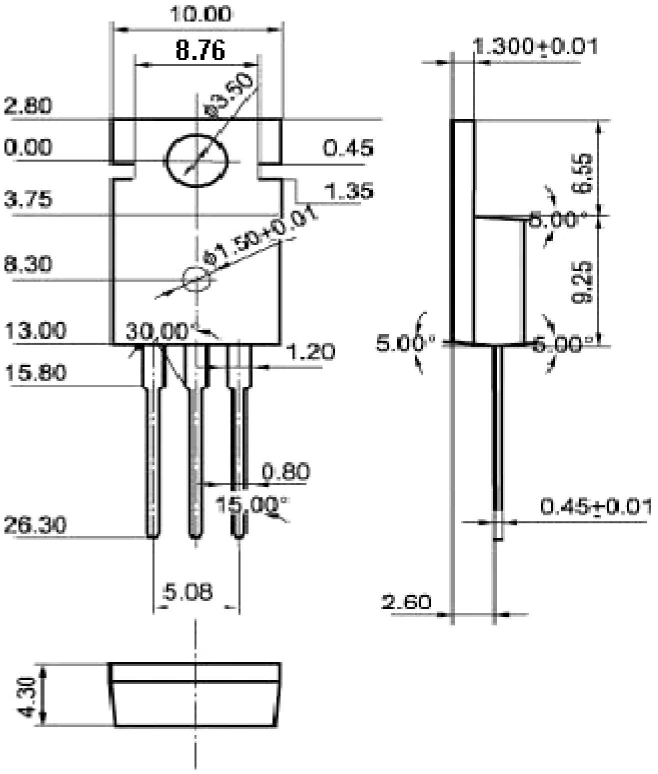

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

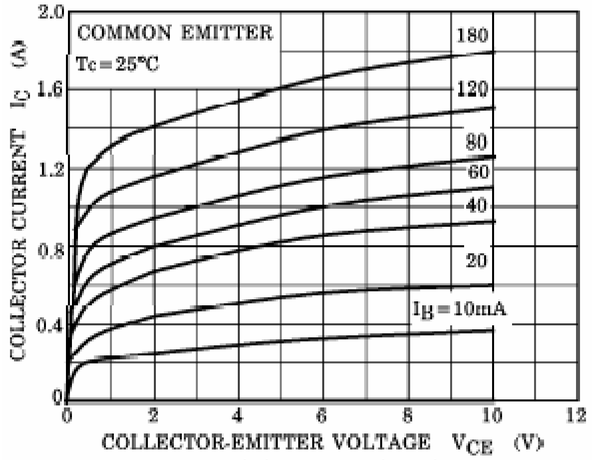

Fig.3 Static Characteristic

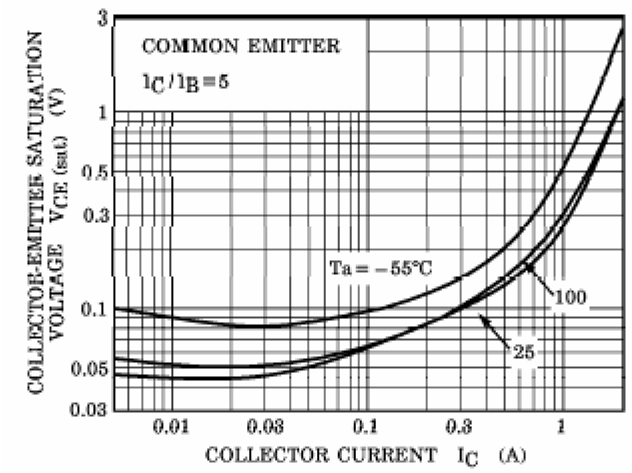

Fig.4 Collector-Emitter Saturation Voltage

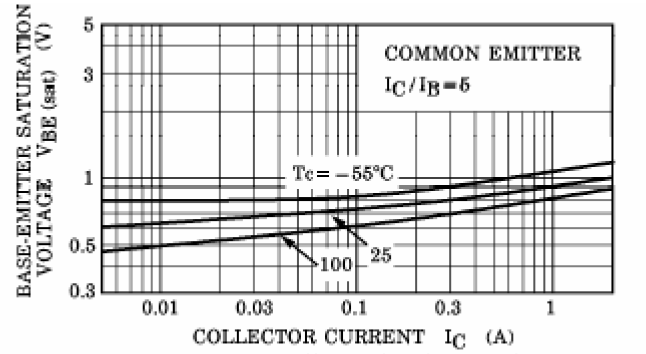

Fig.5 Base-Emitter Saturation Voltage

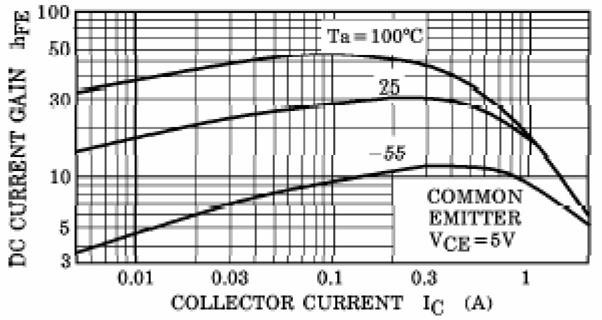

Fig.6 DC current Gain

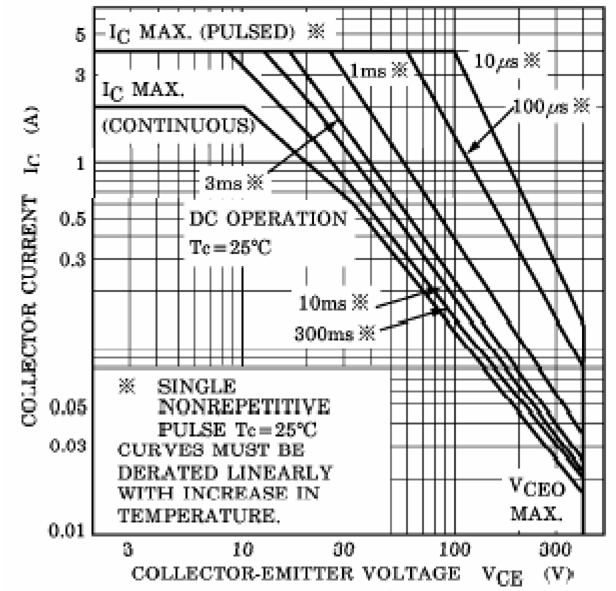

Fig.7 Safe Operating Area