Silicon NPN Power Transistors 2SC3307

DESCRIPTION

·With TO-3PL package

·Excellent switching times

: t_r=1.0μs(Max .),t_f=1.0μs(Max .)(I_C=5A)

·High collector breakdown voltage : V_{CEO}=800V

APPLICATIONS

·High speed,high voltage switching applications

·Switching regulator applications

·High speed DC-DC converter applications

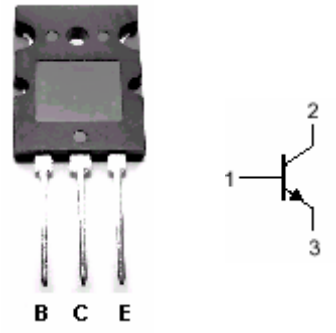

Fig.1 simplified outline (TO-3PL) and symbol

PINNING

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

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	900	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		10	A
I_{CM}	Collector current-peak		15	A
I_B	Base current		3	A
P_C	Collector power dissipation	T_C=25□	150	W
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
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ;I_B=0	800			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA ;I_E=0	900			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=5A ;I_B=1A			1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=5A ;I_B=1A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=800V ;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=10mA ; V_{CE}=5V	10			
h_{FE-2}	DC current gain	I_C=5A ; V_{CE}=5V	10			

Switching times

t_r	Rise time	I_C=1A ; V_{CC}≈400V I_{B1}=-I_{B2}=0.4A			1.0	μs
t_{stg}	Storage time				3.0	μs
t_f	Fall time				1.0	μs

PACKAGE OUTLINE

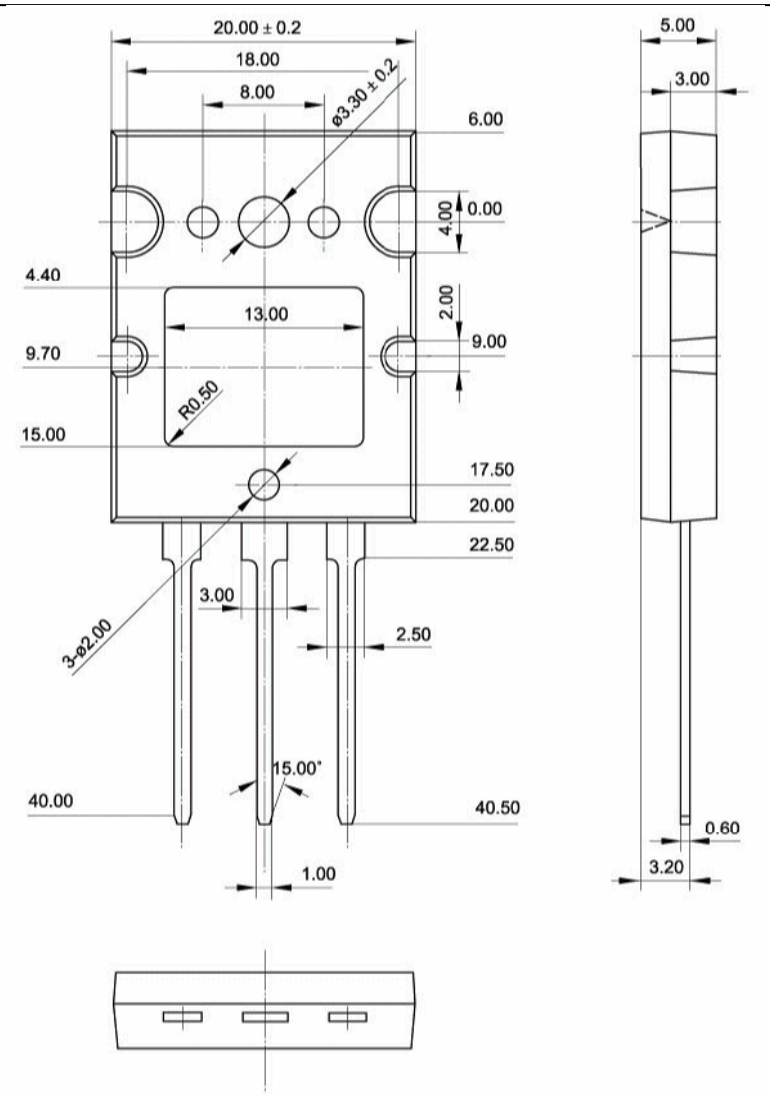

Fig.2 Outline dimensions (unindicated tolerance:±0.50 mm)

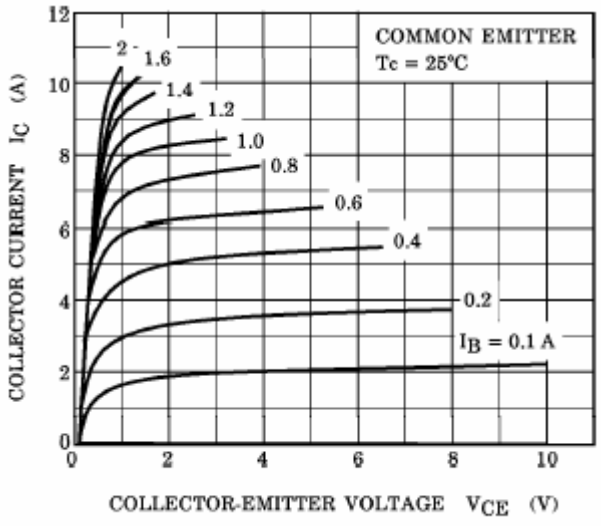

Fig.3 Static Characteristic

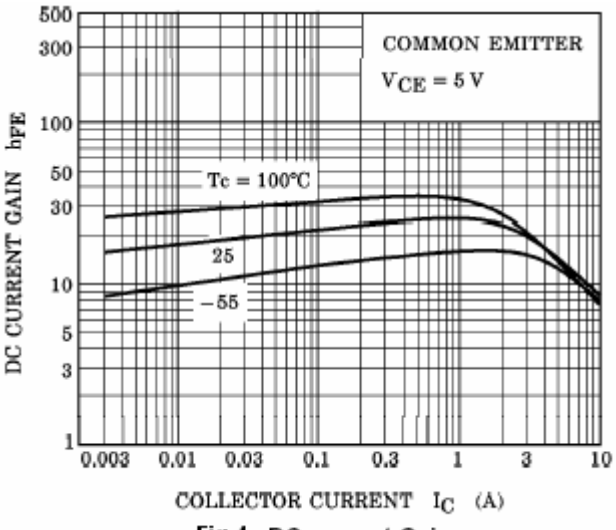

Fig.4 DC current Gain

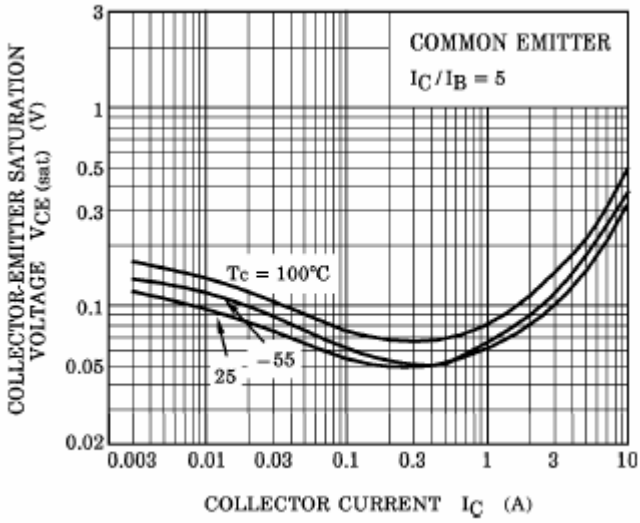

Fig.5 Collector-Emitter Saturation Voltage

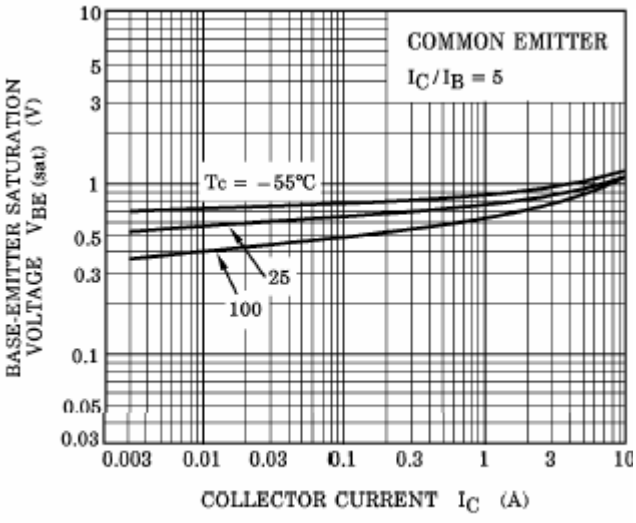

Fig.6 Base-Emitter Saturation Voltage

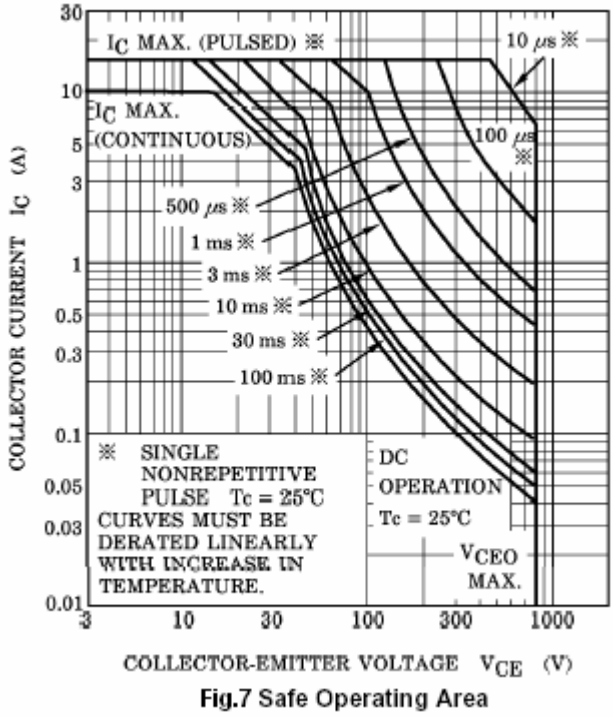

Fig.7 Safe Operating Area