

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SC3307

DESCRIPTION

- With TO-3PL package
- Excellent switching times
: $t_r=1.0 \mu s(\text{Max.}), t_f=1.0 \mu s(\text{Max.})(I_C=5A)$
- High collector breakdown voltage : $V_{CEO}=800V$

APPLICATIONS

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

PINNING

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



Absolute maximum ratings($T_a=25^\circ C$)

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

T_j=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				1.0	μs
t _{stg}	Storage time	I _C =1A ; V _{CC} 400V I _{B1} =-I _{B2} =0.4A			3.0	μs
t _f	Fall time				1.0	μs

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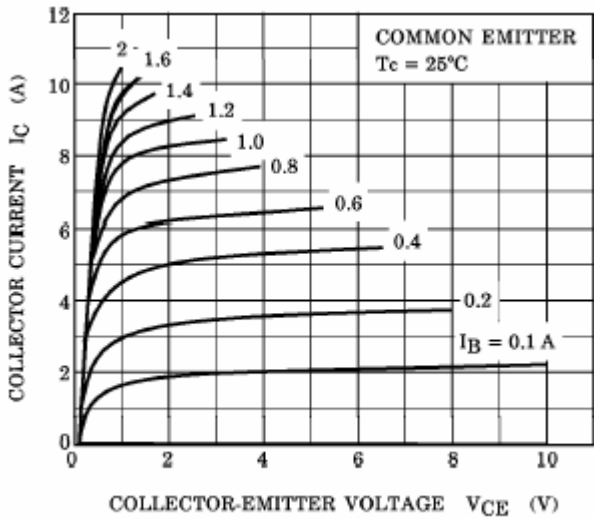


Fig.3 Static Characteristic

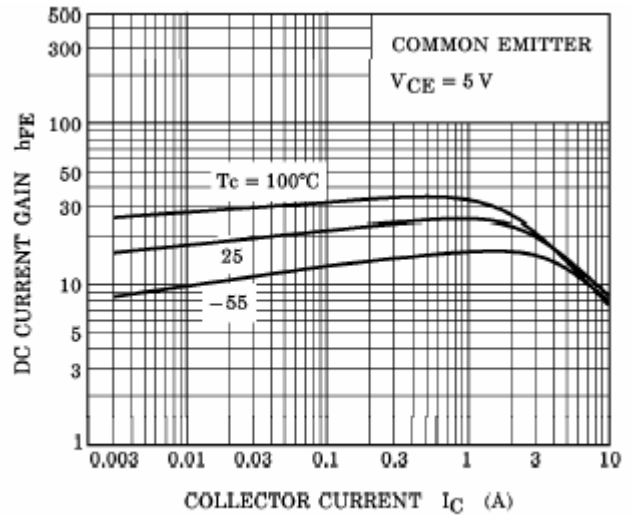


Fig.4 DC current Gain

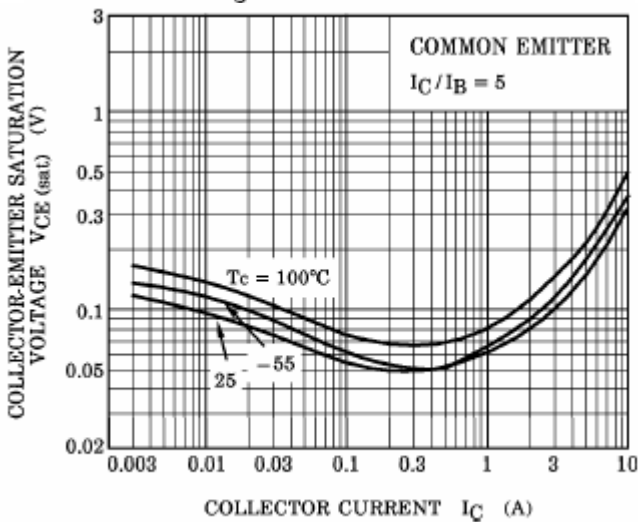


Fig.5 Collector-Emitter Saturation Voltage

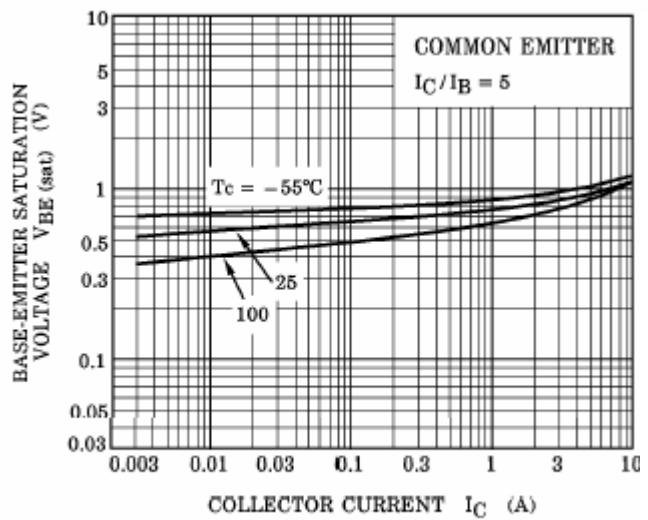


Fig.6 Base-Emitter Saturation Voltage

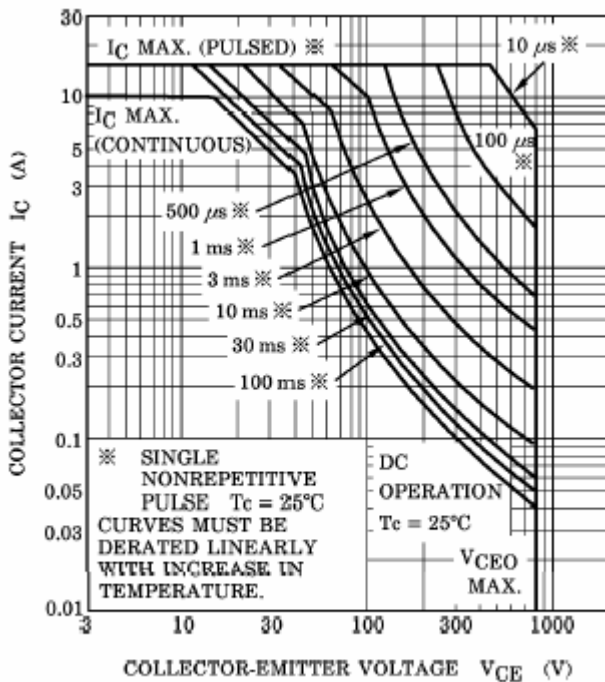


Fig.7 Safe Operating Area