

Silicon NPN Power Transistors

2SC3258

DESCRIPTION

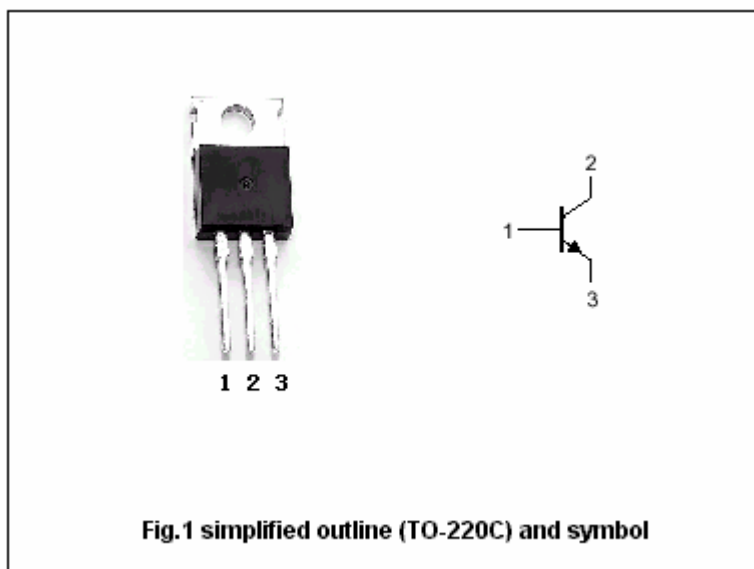
- With TO-220 package
- Complement to type 2SA1293
- Low collector saturation voltage
- High speed switching time

APPLICATIONS

- High current switching applications

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-Peak		8	A
I_B	Base current		1	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	30	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector -emitter breakdown voltage	$I_C=10mA, I_B=0$	80			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3A; I_B=0.15A$			0.4	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=3A; I_B=0.15A$			1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=100V; I_E=0$			1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V; I_C=0$			1	μA
h_{FE-1}	DC current gain	$I_C=1A; V_{CE}=1V$	70		240	
h_{FE-2}	DC current gain	$I_C=3A; V_{CE}=1V$	40			
C_{ob}	Output capacitance	$I_E=0; V_{CB}=10V; f=1MHz$		80		pF
f_T	Transition frequency	$I_C=1A; V_{CE}=4V$		120		MHz

Switching times

t_{on}	Turn-on time	$I_C=3.0A, I_{B1}=-I_{B2}=0.15A$ $R_L=10\Omega; V_{CC}\approx 30V$		0.2		μs
t_s	Storage time			1.0		μs
t_f	Fall time			0.1		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240

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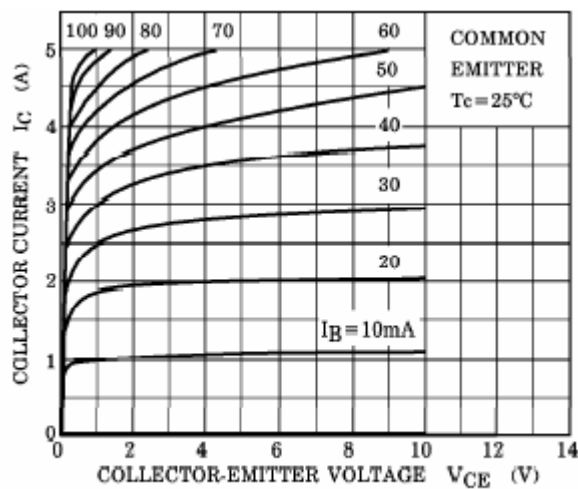


Fig.3 Static Characteristic

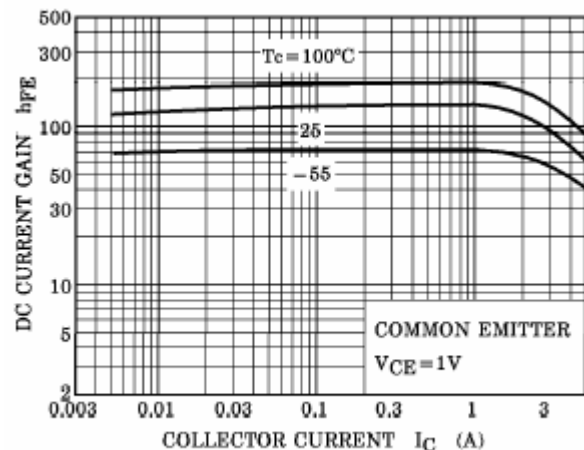


Fig.4 DC current Gain

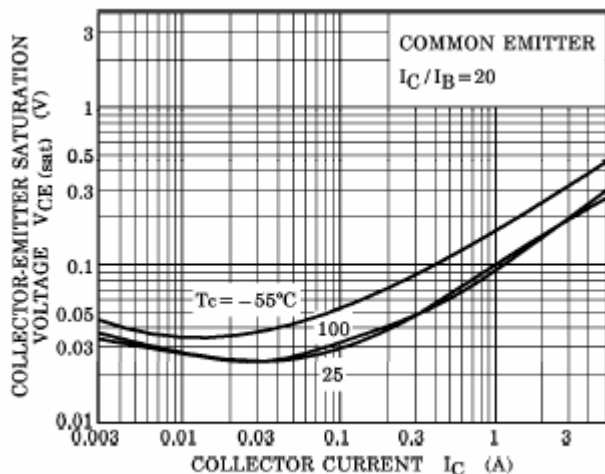


Fig.5 Collector-Emitter Saturation Voltage

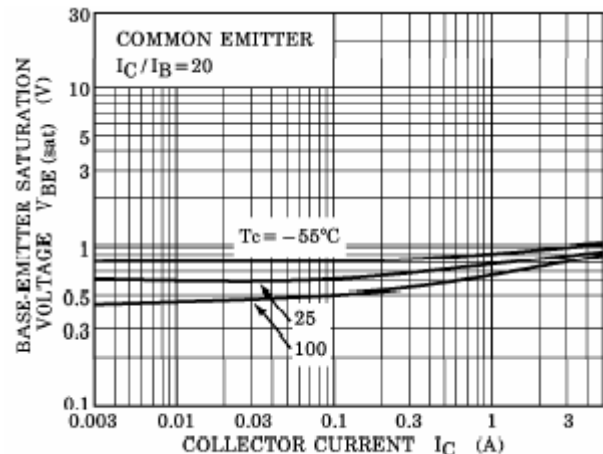


Fig.6 Base-Emitter Saturation Voltage

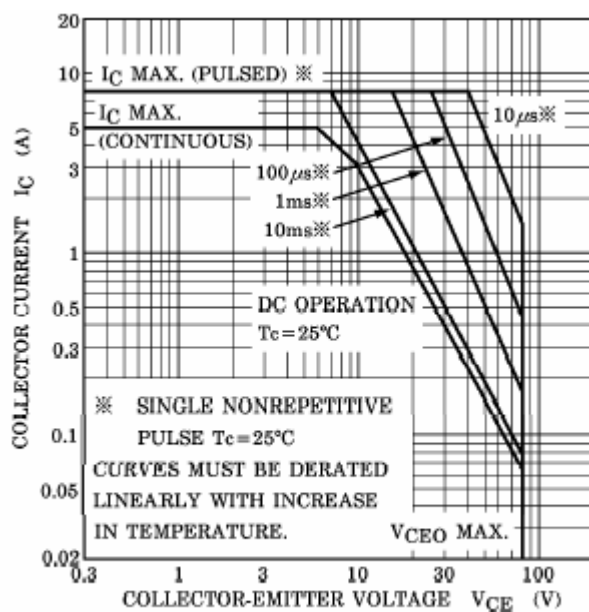


Fig.7 Safe Operating Area