Silicon NPN Power Transistors 2SC4512

DESCRIPTION

- With TO-220C package
- Complement to type 2SA1726

APPLICATIONS

- Audio and General Purpose

PINNING

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

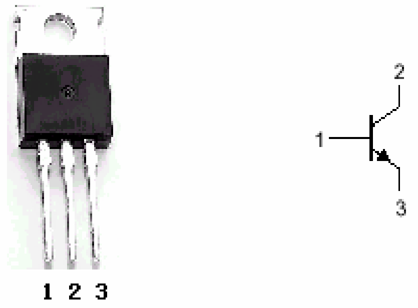

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		6	A
I_B	Base current		3	A
P_C	Collector dissipation	T_C=25℃	50	W
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=25mA; $R_{BE}=\infty$	80			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=5A; I_B=0.2A			0.5	V
I_{CBO}	Collector cut-off current	V_{CB}=120V ;I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			10	μA
h_{FE}	DC current gain	I_C=2A ; V_{CE}=4V	50			
C_{OB}	Collertor output capacitance	f=1MHz; V_{CB}=10V		110		pF
f_T	Transition frequency	I_E=-0.5A ; V_{CE}=12V		20		MHz

Switching times

t_{on}	Turn-on time	V_{CC}=30V; I_C=3A $I_{B1}=-I_{B2}$=0.3A R_L=10Ω		0.16		μs
t_{stg}	Storage time			2.60		μs
t_f	Fall time			0.34		μs

◆ h_{FE} Classifications

O	P	Y
50-100	70-140	90-180

PACKAGE OUTLINE

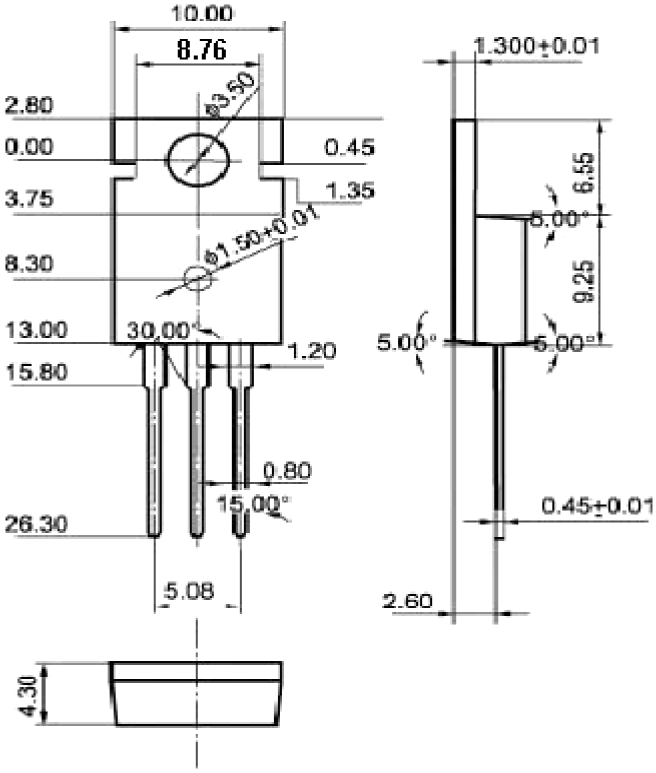

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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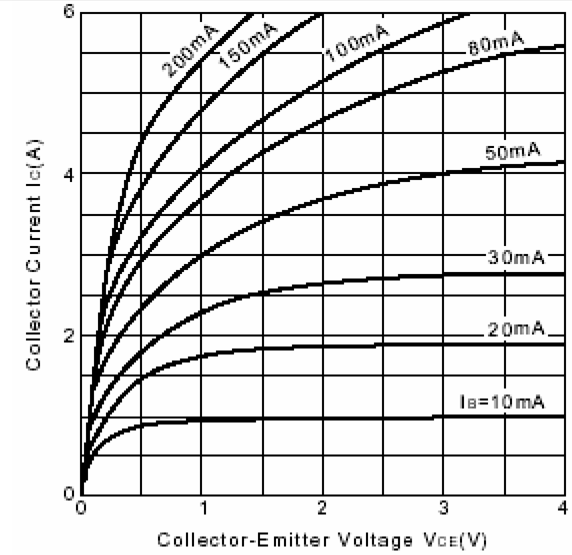

Fig.3 Static Characteristic

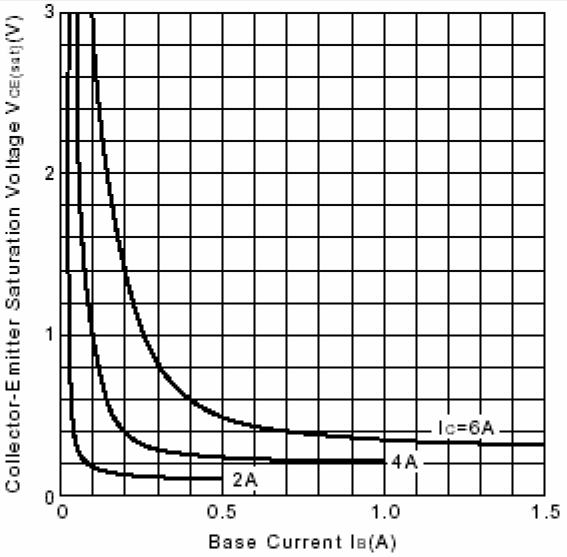

Fig.4 VCE(sat)−IB Characteristics

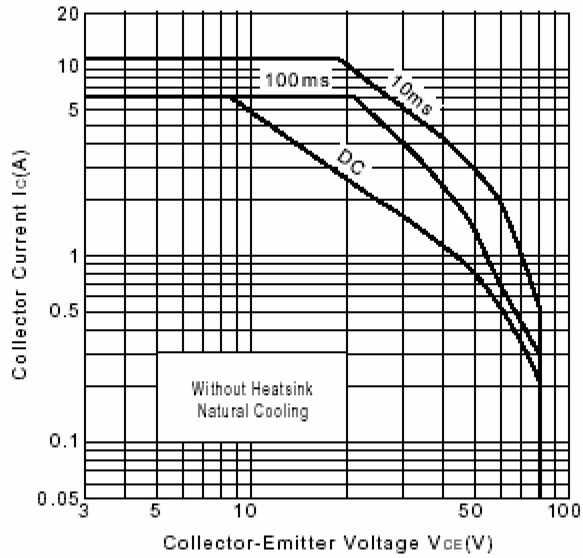

Fig.5 Safe Operating Area

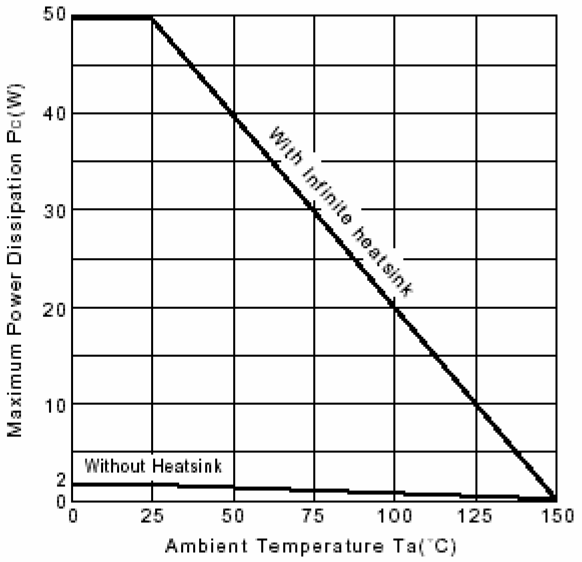

Fig.6 PC−Ta Derating

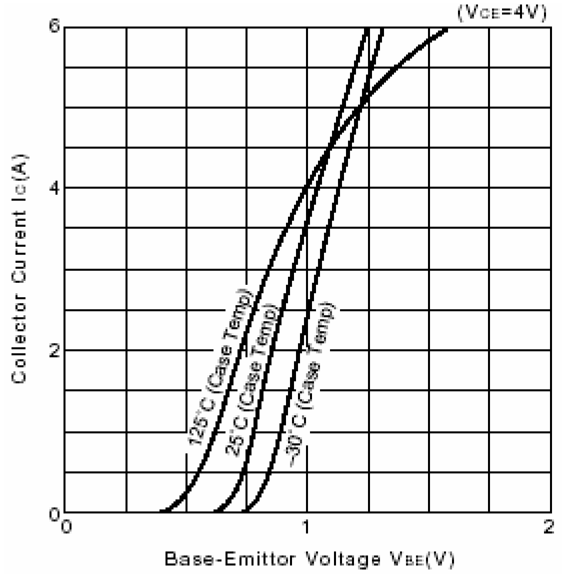

Fig.7 IC−VBE

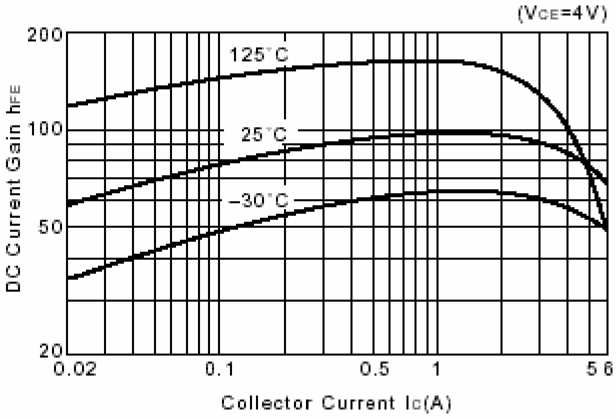

Fig.8 DC current Gain