Silicon NPN Power Transistors 2SC4706

DESCRIPTION

- With TO-3PN package
- High voltage switching transistor

APPLICATIONS

- For switching regulator and general purpose applications

PINNING

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

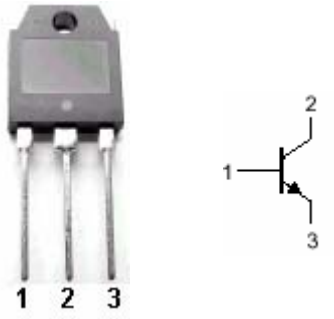

Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	900	V
V_{CEO}	Collector-emitter voltage	Open base	600	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		14	A
I_{CM}	Collector current-peak		28	A
I_B	Base current		7	A
P_C	Collector power dissipation	T_C=25℃	130	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=10mA ; I_B=0	600			V
I_{CBO}	Collector cut-off current	V_{CB}=800V; I_E=0			0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			0.1	mA
h_{FE}	DC current gain	I_C=7A ; V_{CE}=4V	10		25	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=7A ; I_B=1.4A			0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=7A ; I_B=1.4A			1.2	V
f_T	Transition frequency	V_{CE}=12V;I_E=-1.5A		6		MHz
C_{OB}	Collector output capacitance	V_{CB}=10V;f=1MHz		160		pF
Switching times						
t_{on}	Turn-on time	I_C=7A;R_L=35.7Ω I_{B1}=1.05A;I_{B2}=-3.5A V_{CC}=250V			1.0	μs
t_s	Storage time				5.0	μs
t_f	Fall time				0.7	μs

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PACKAGE OUTLINE

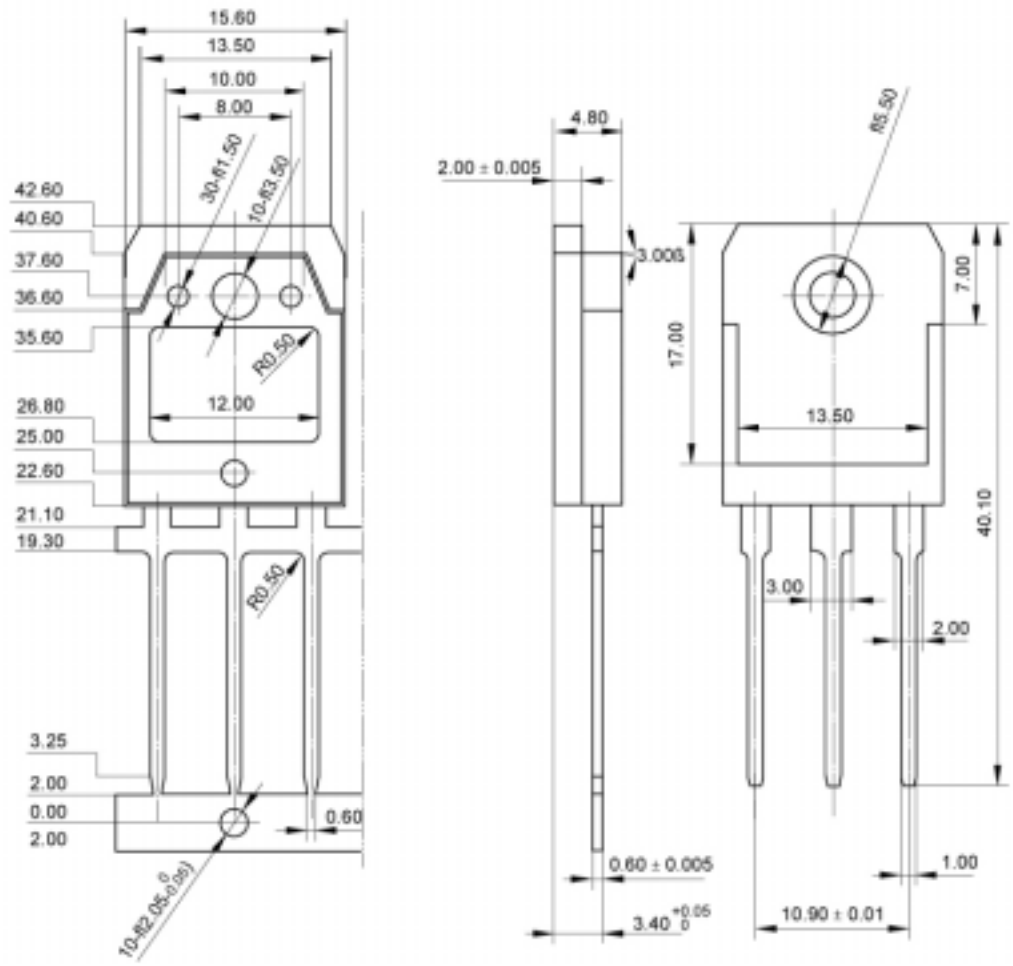

Fig.2 outline dimensions (unindicated tolerance:±0.1mm)

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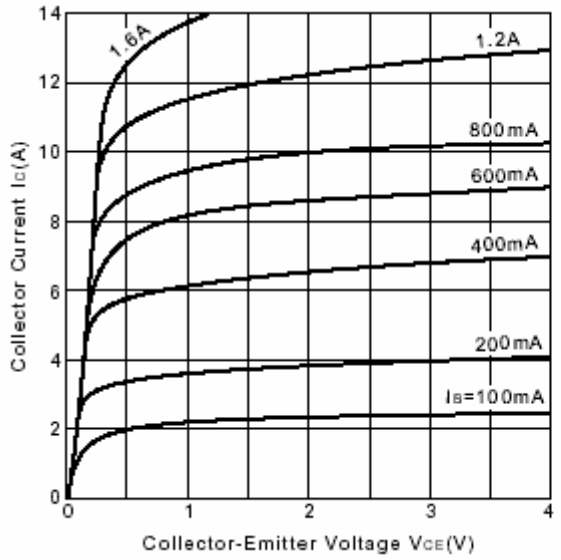

Fig.3 Static Characteristic

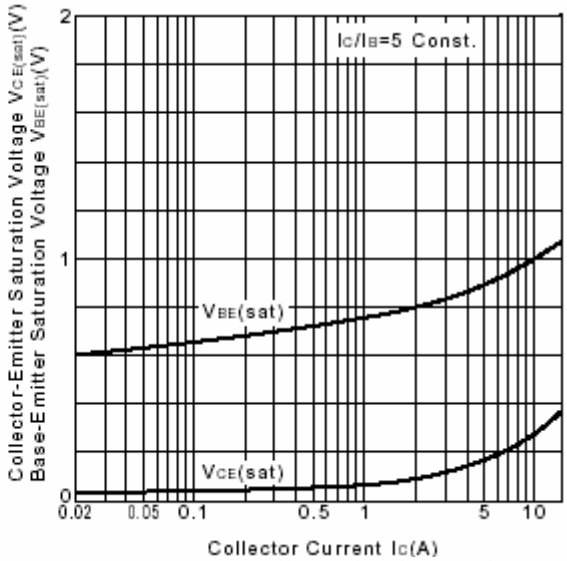

Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

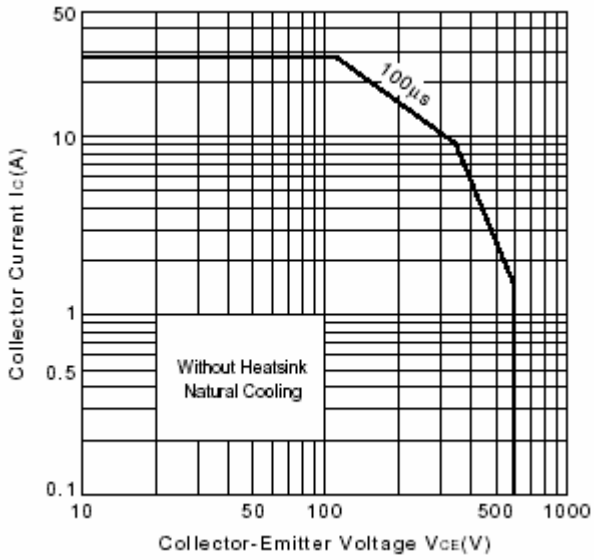

Fig.5 Safe Operating Area

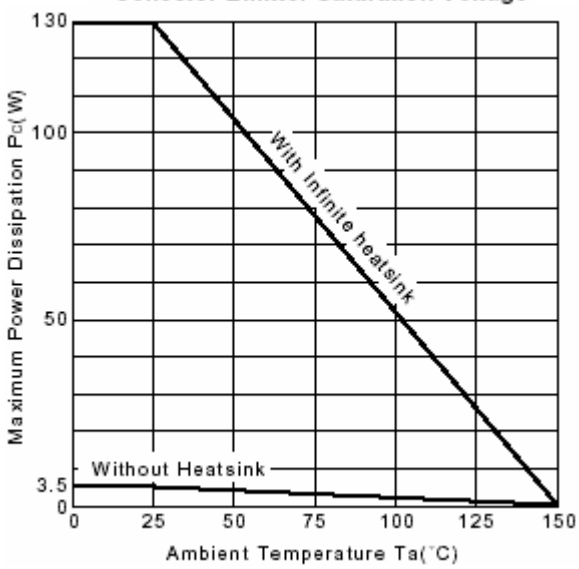

Fig.6 Pc−Ta Derating

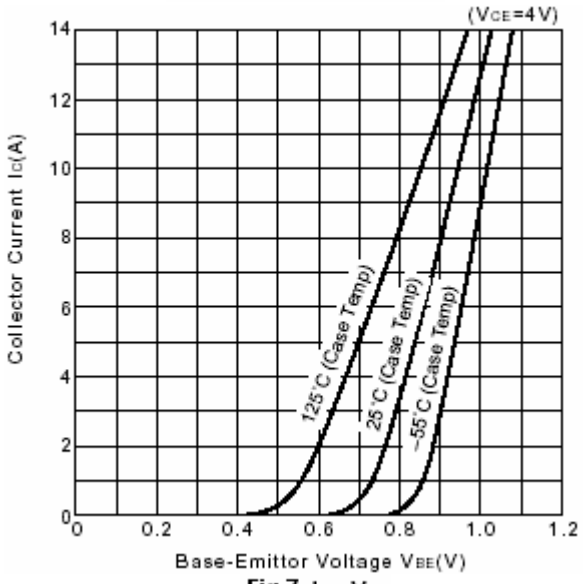

Fig.7 $I_C - V_{BE}$

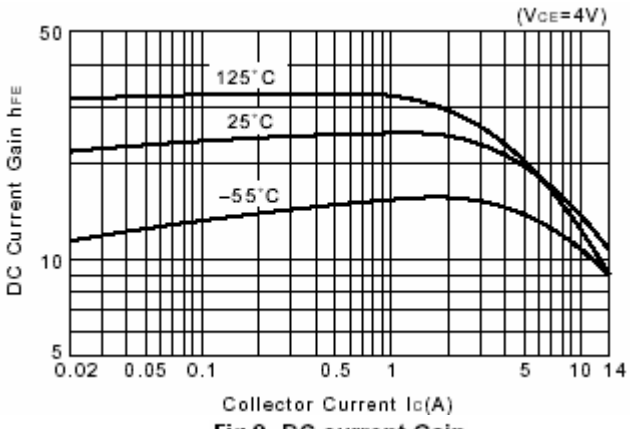

Fig.8 DC current Gain