Silicon NPN Power Transistors 2SC4517 2SC4517A

DESCRIPTION

·With TO-220F package
·High voltage switching transistor

APPLICATIONS

·For switching regulator and
general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

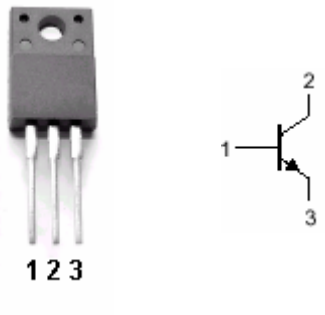


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SC4517	Open emitter	900	V
		2SC4517A		1000	
V_{CEO}	Collector-emitter voltage		Open base	550	V
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current			3	A
I_{CM}	Collector current-pulse			6	A
I_B	Base current			1.5	A
P_C	Collector power dissipation		T_C=25□	30	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	550			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=1A; I_B=0.2A			0.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=1A; I_B=0.2A			1.2	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			100	μA
h_{FE}	DC current gain	I_C=1A ; V_{CE}=4V	10		30	
C_{OB}	Output capacitance	I_E=0; V_{CB}=10V;f=1MHz		35		pF
f_T	Transition frequency	I_E=-0.25A ; V_{CE}=12V		6		MHz

Switching times

t_{on}	Turn-on time	I_C=1.0A I_{B1}=0.15A I_{B2}=-0.45A V_{CC}=250V ,R_L=250Ω			0.7	μs
t_s	Storage time				4.0	μs
t_f	Fall time				0.5	μs

PACKAGE OUTLINE

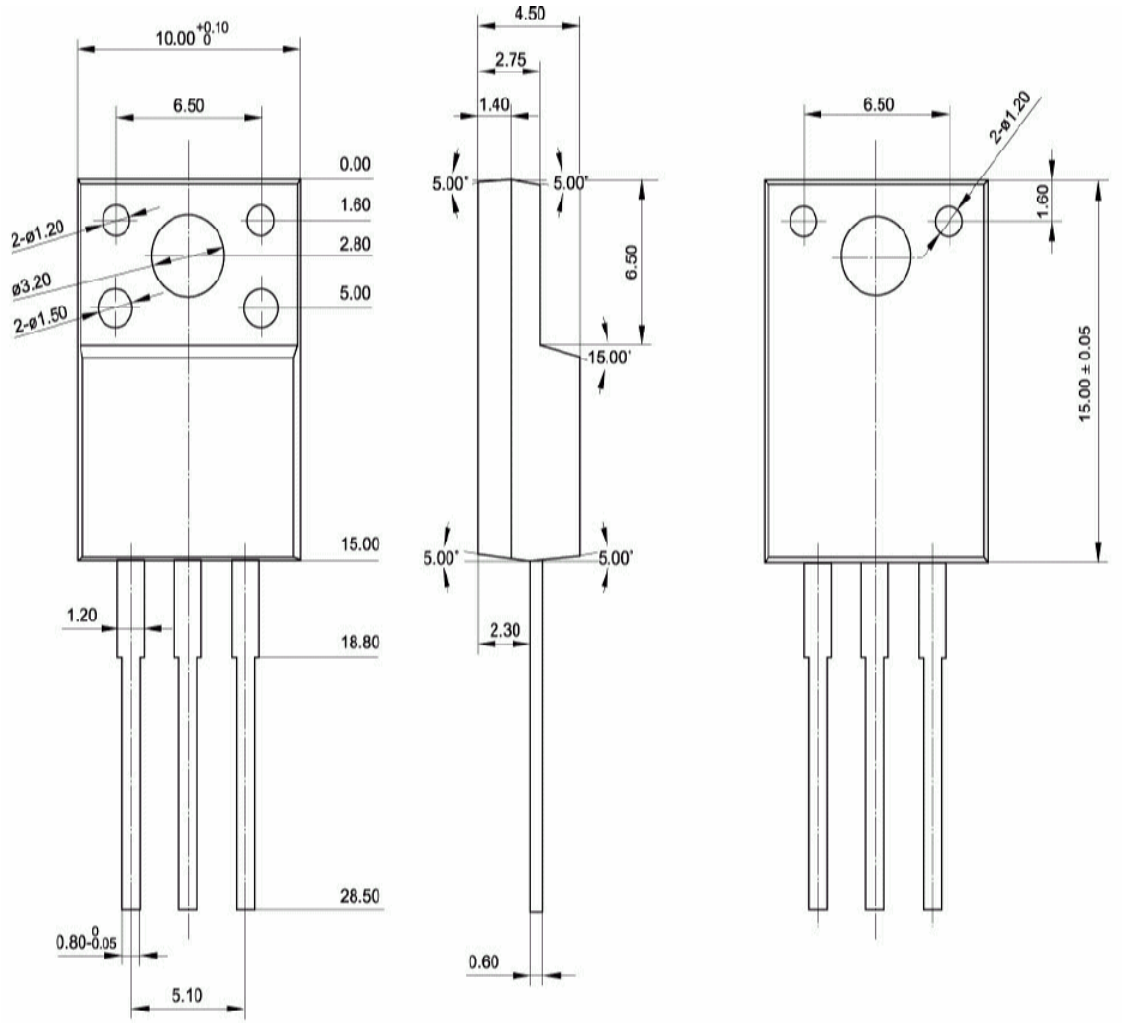


Fig.2 Outline dimensions

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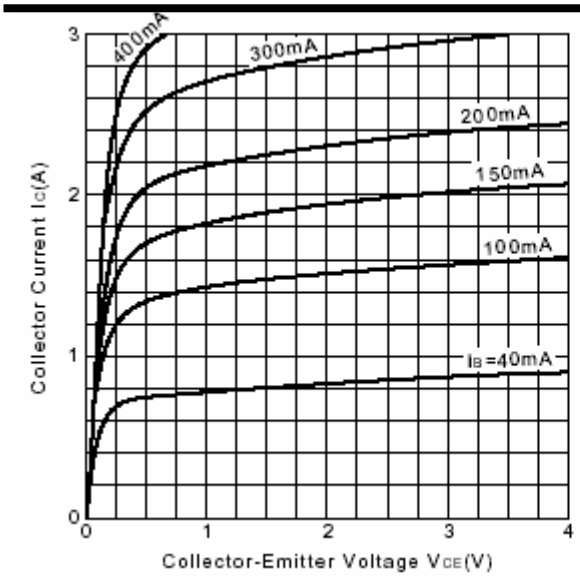


Fig.3 Static Characteristic

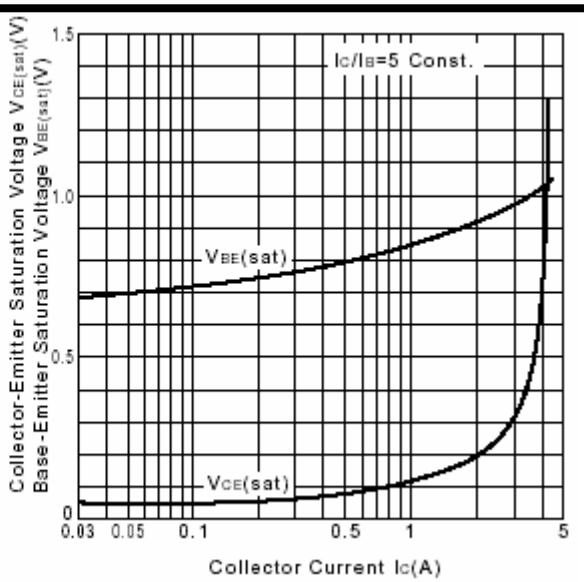


Fig.4 Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

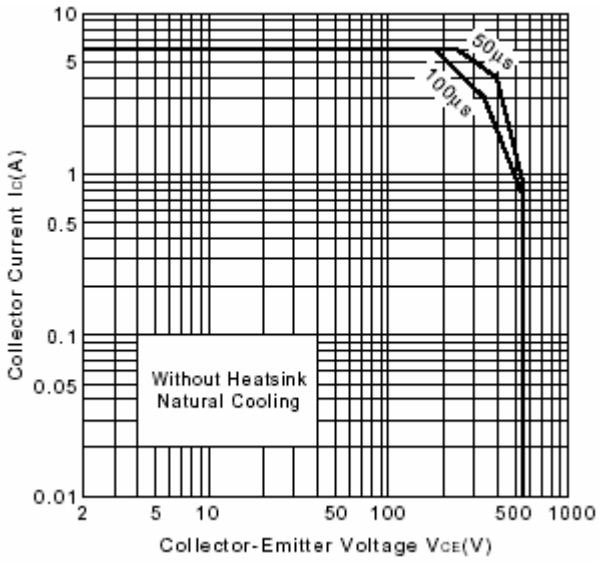


Fig.5 Safe Operating Area

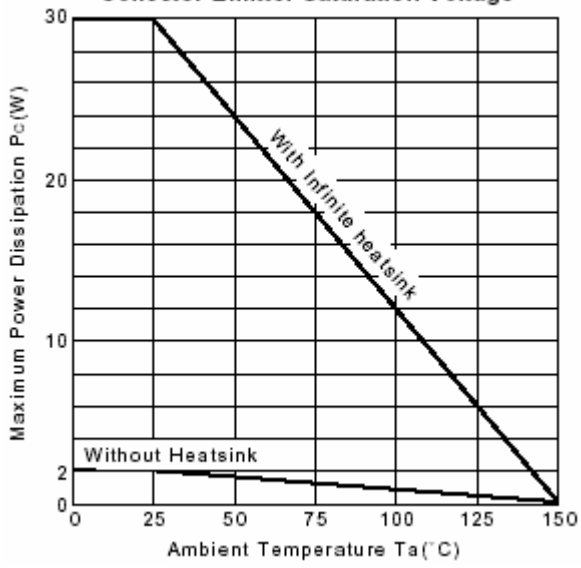


Fig.6 Pc−Ta Derating

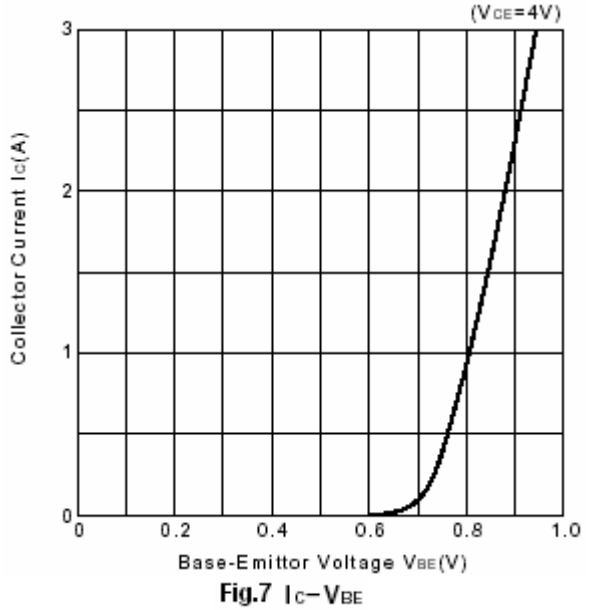


Fig.7 I_C-V_{BE}

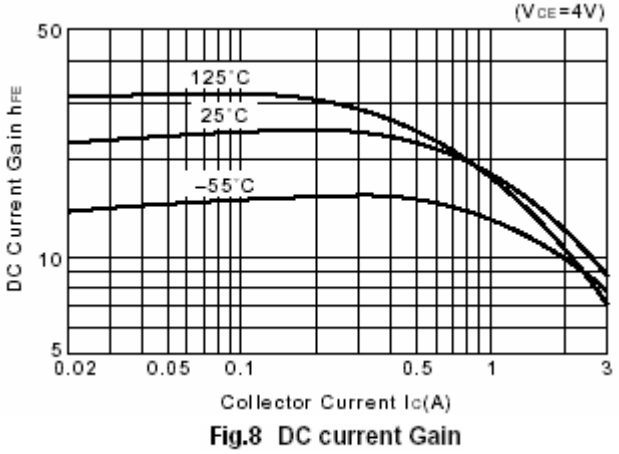


Fig.8 DC current Gain