Silicon NPN Power Transistors 2SC3927

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

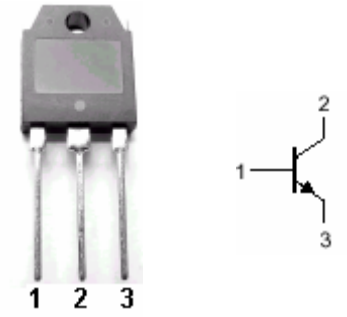

Fig.1 simplified outline (TO-3PN) and symbol

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	550	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		10	A
I_{CP}	Collector current-pulse		15	A
I_B	Base current		5	A
P_C	Collector power dissipation	T_C=25□	120	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=5A ;I_B=1A			0.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=5A ;I_B=1A			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=5A ; V_{CE}=4V	10		28	
C_{ob}	Output capacitance	I_E=0 ; V_{CB}=10V;f=1MHz		105		pF
f_T	Transition frequency	I_E=1A ; V_{CE}=12V		6		MHz

Switching times

t_{on}	Turn-on time	I_C=5A; I_{B1}=0.75A;I_{B2}=-1.5A R_L=50Ω;V_{CC}=250V			1.0	μs
t_s	Storage time				5.0	μs
t_f	Fall time				0.5	μs

PACKAGE OUTLINE

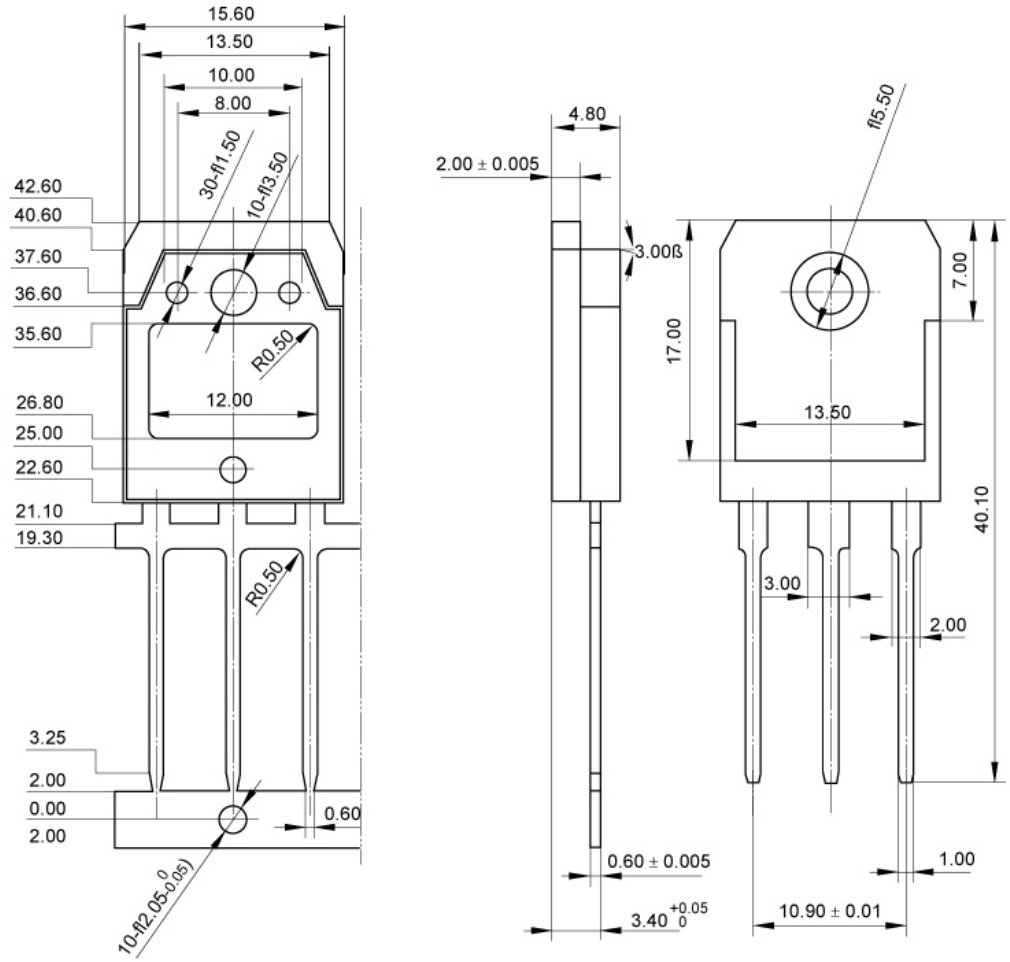

Fig.2 outline dimensions (unindicated tolerance:±0.1mm)

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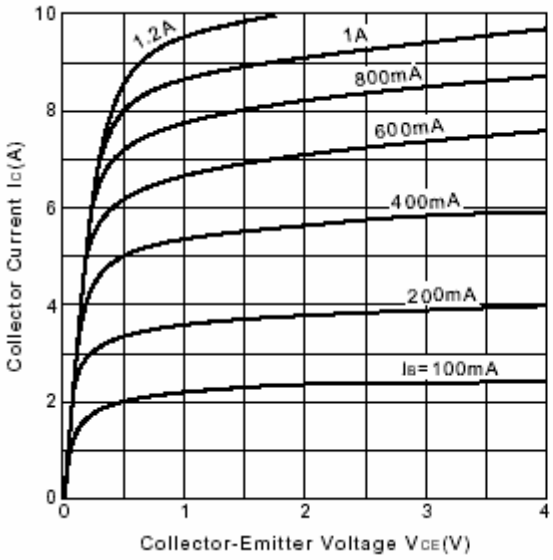

Fig.3 Static Characteristic

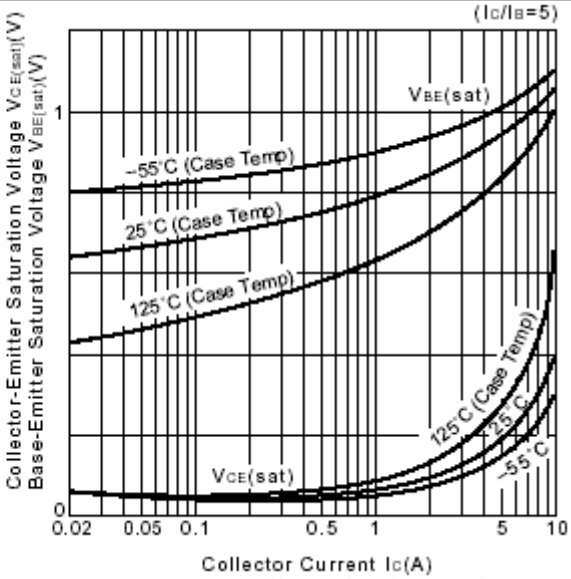

Fig.4 Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

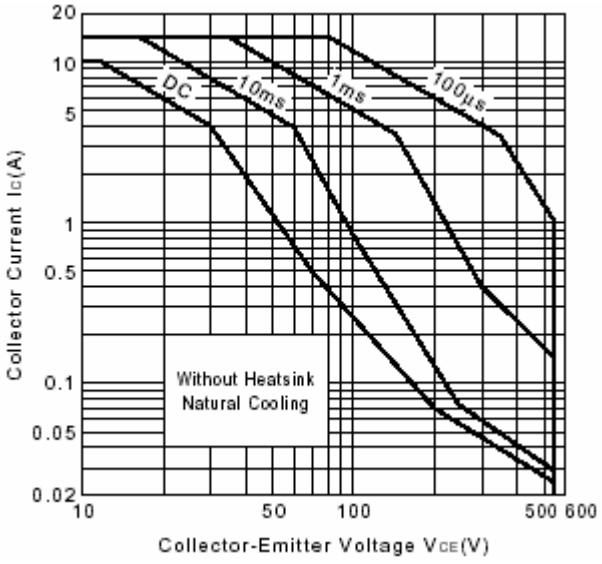

Fig.5 Safe Operating Area

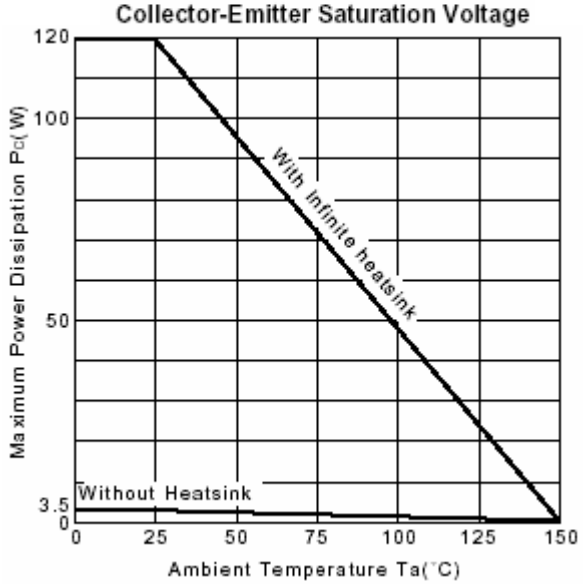

Fig.6 Pc-Ta Derating

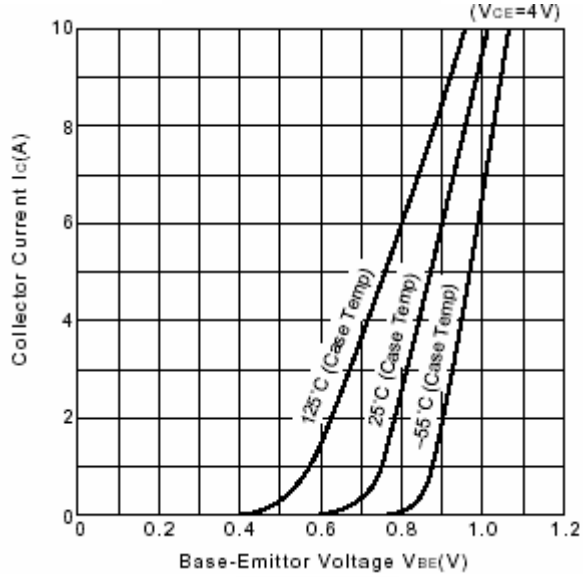

Fig.7 IC-VBE

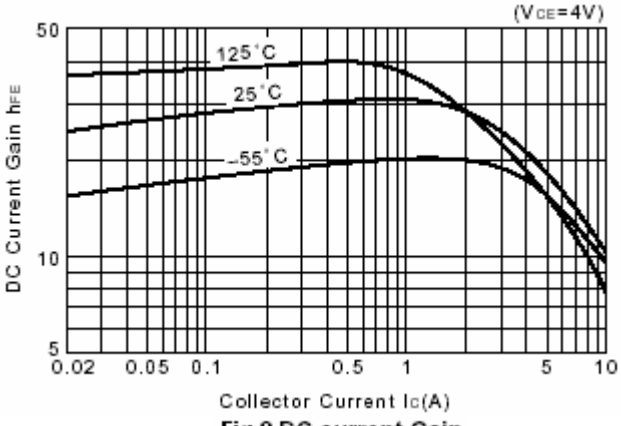

Fig.8 DC current Gain