Silicon NPN Power Transistors 2SC2837

DESCRIPTION

·With TO-3PN package

·Complement to type 2SA1186

APPLICATIONS

·For audio and general purpose applications

PINNING

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

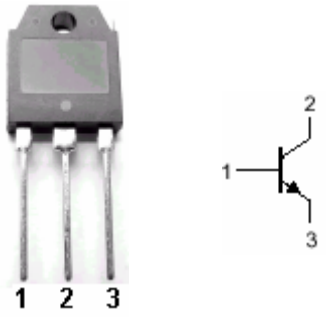

Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	150	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		10	A
I_B	Base current		2	A
P_C	Collector power dissipation	T_C=25□	100	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

Silicon NPN Power Transistors 2SC2837

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=25mA ;I_B=0	150			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=5A ;I_B=0.5A			2.0	V
I_{CBO}	Collector cut-off current	V_{CB}=150V; I_E=0			0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			0.1	mA
h_{FE}	DC current gain	I_C=3A ; V_{CE}=4V	50			
f_T	Transition frequency	I_E=-1A ; V_{CE}=12V		70		MHz
C_{OB}	Collector output capacitance	f=1MHz;V_{CB}=80V		60		pF
Switching times						
t_{on}	Turn-on time	I_C=5A I_{B1}=-I_{B2}=0.5A V_{CC}=60V, R_L=12Ω		0.2		μs
t_s	Storage time			1.4		μs
t_f	Fall time			0.35		μs

◆ **h_{FE} Classifications**

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

PACKAGE OUTLINE

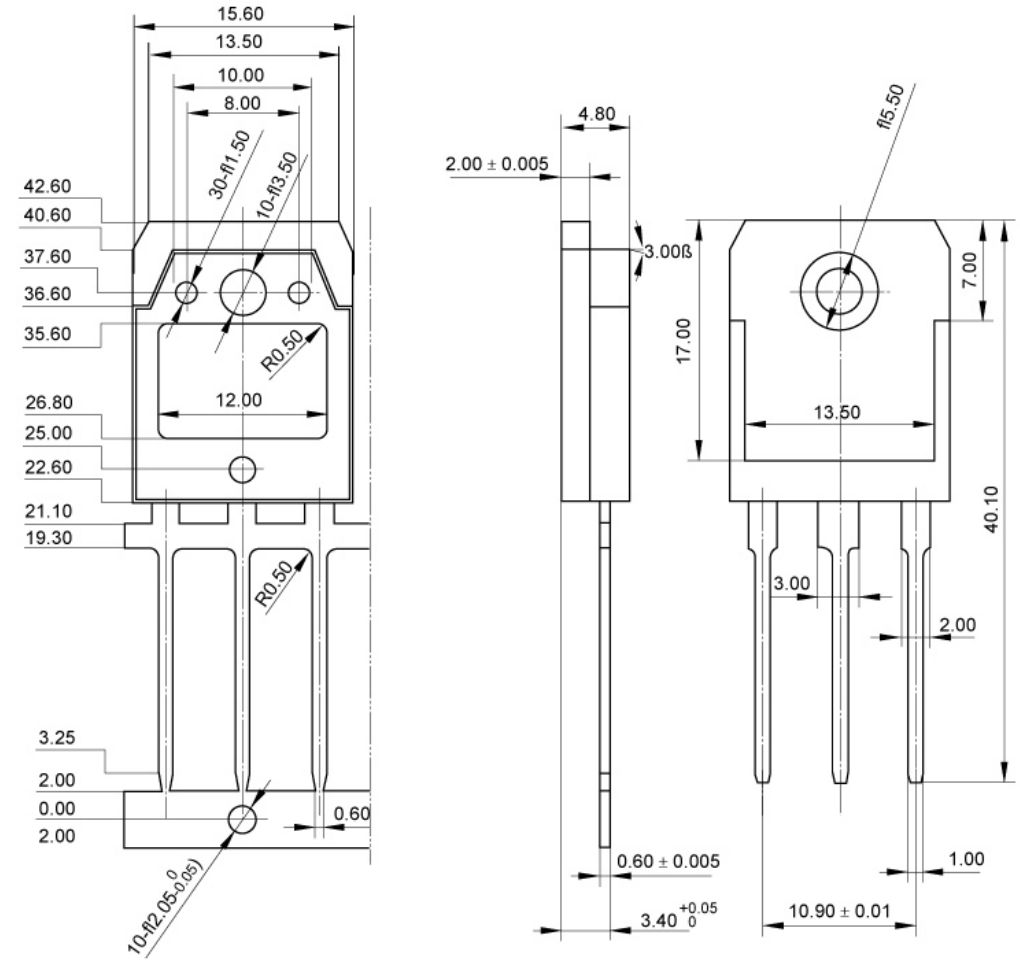

Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)

Silicon NPN Power Transistors 2SC2837

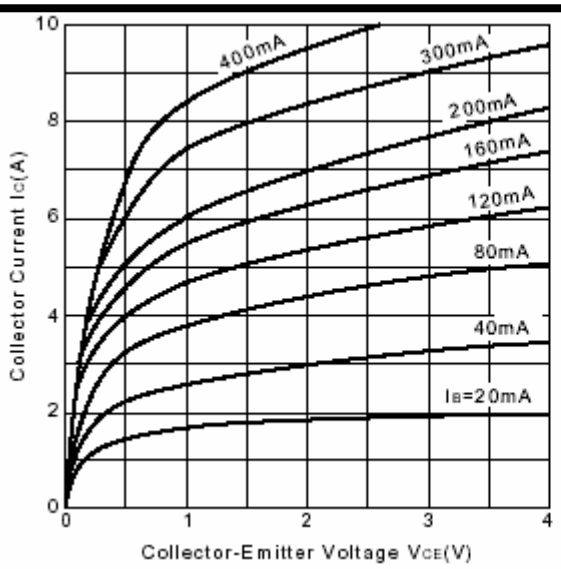

Fig.3 Static Characteristic

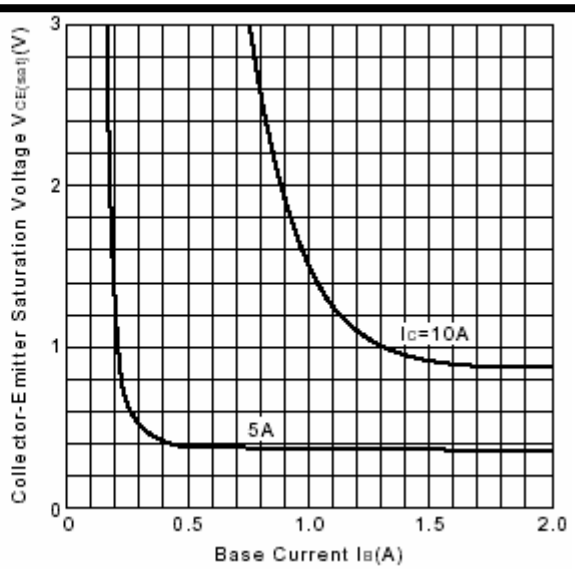

Fig.4 $V_{CE}(sat)-I_B$

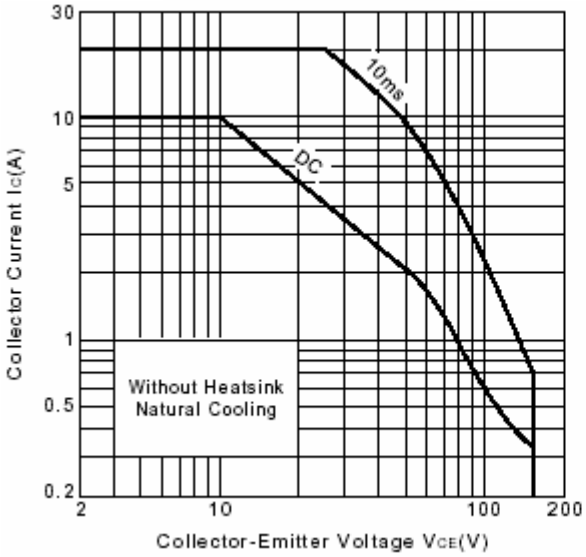

Fig.5 Safe Operating Area

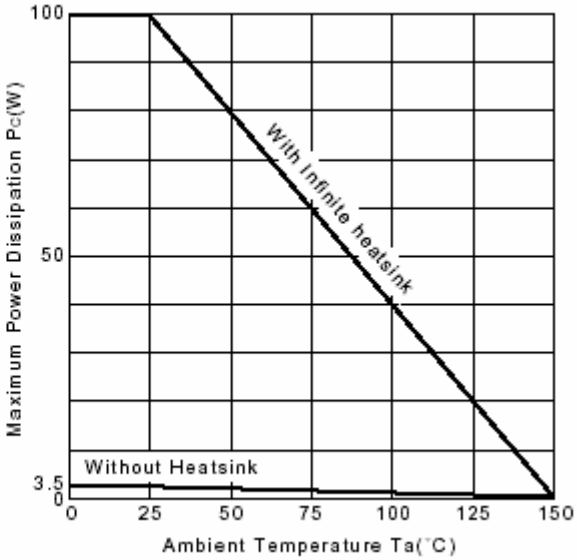

Fig.6 Power Derating

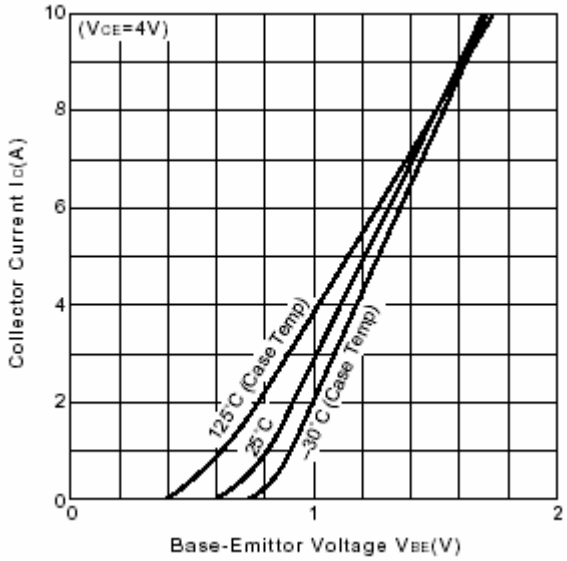

Fig.7 I_C-V_{BE}

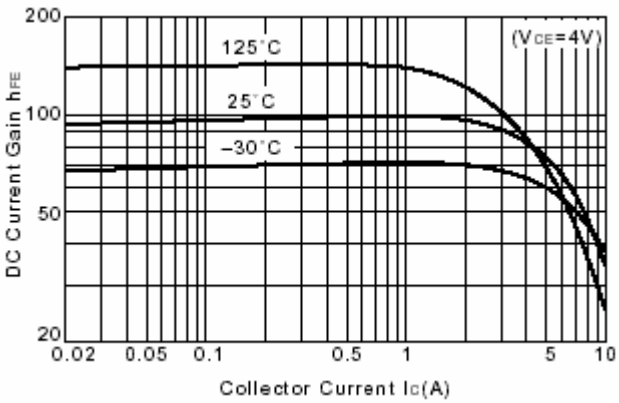

Fig.8 DC current Gain