

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

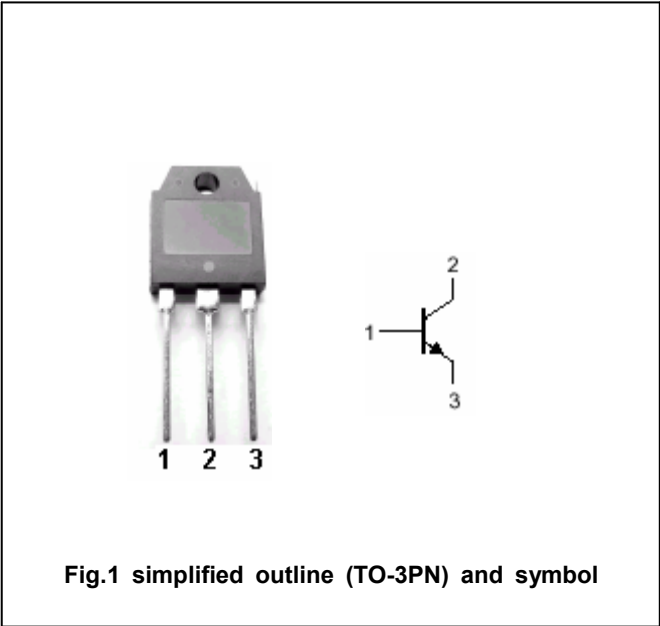


Fig.1 simplified outline (TO-3PN) and symbol

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	$T_C=25^{\circ}C$	100	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

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CHARACTERISTICS

Tj=25°C 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	$I_C=5A$ $I_{B1}=-I_{B2}=0.5A$ $V_{CC}=60V$, $R_L=12\Omega$		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

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

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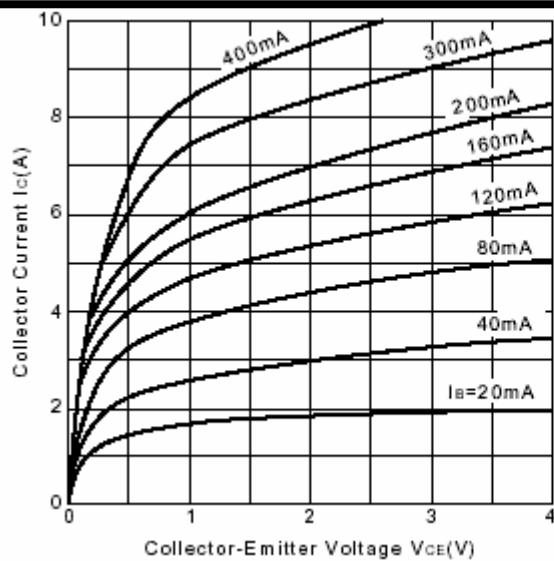


Fig.3 Static Characteristic

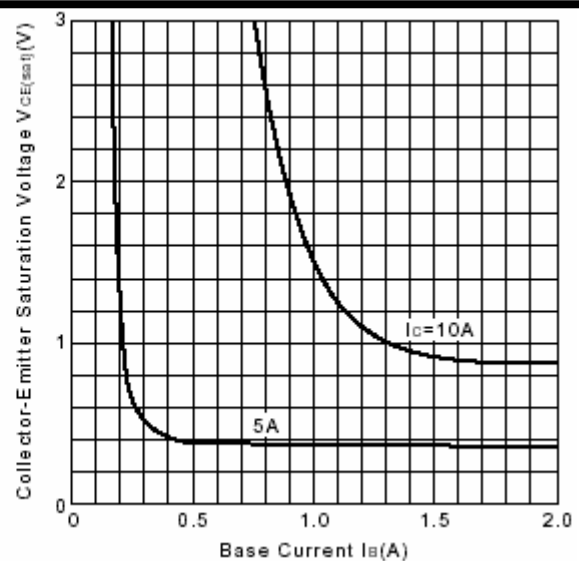
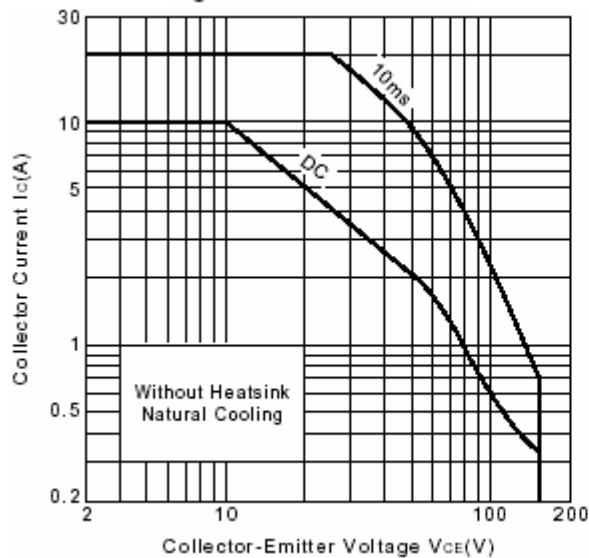
Fig.4 $V_{CE(sat)}-I_B$ 

Fig.5 Safe Operating Area

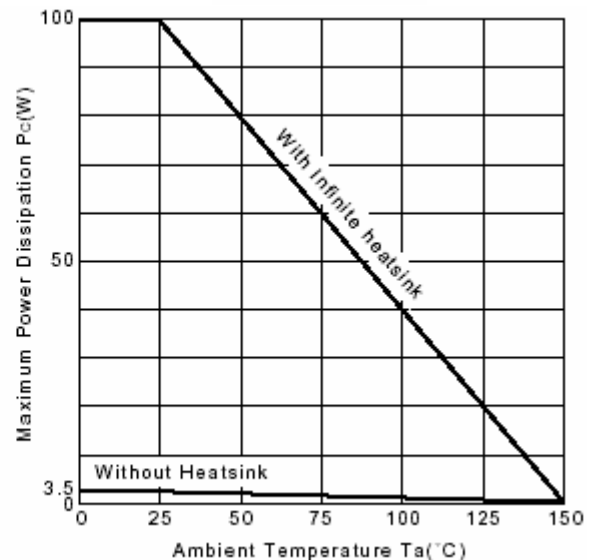


Fig.6 Power Derating

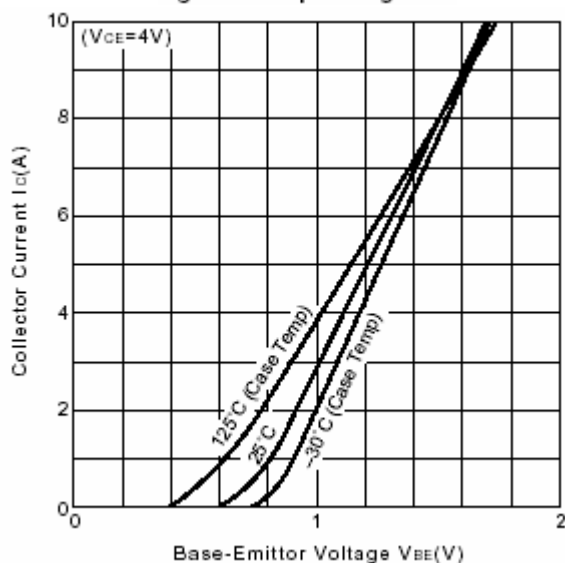
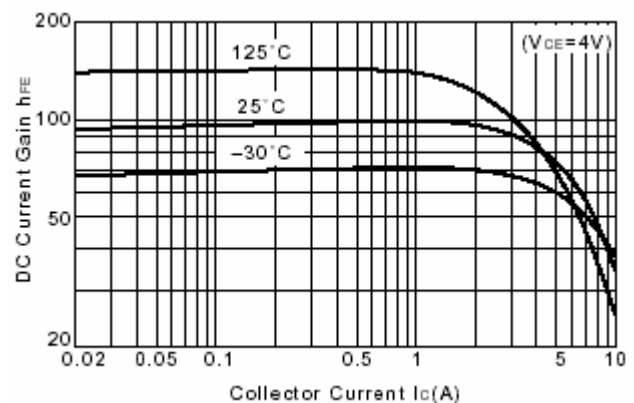
Fig.7 I_C-V_{BE} 

Fig.8 DC current Gain