Silicon NPN Power Transistors 2SC3858

DESCRIPTION

·With MT-200 package
·Complement to type 2SA1494

APPLICATIONS

·Audio and general purpose

PINNING(see Fig.2)

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

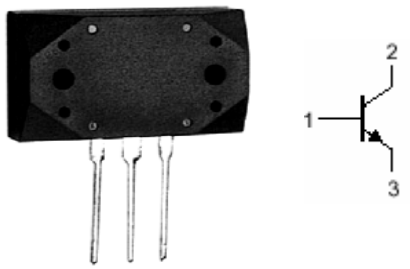

Fig.1 simplified outline (MT-200) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	200	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		17	A
I_B	Base current		5	A
P_C	Collector power dissipation	T_C=25□	200	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=50mA; I_B=0	200			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=10 A;I_B=1 A			2.5	V
I_{CBO}	Collector cut-off current	V_{CB}=200V; I_E=0			100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			100	μA
h_{FE}	DC current gain	I_C=8A ; V_{CE}=4V	50		180	
f_T	Transition frequency	I_C=1A ; V_{CE}=12V		20		MHz
C_{OB}	Output capacitance	I_E=0; V_{CB}=10V;f=1MHz		300		pF
Switching times						
t_{on}	Turn-on time	I_C=10A;R_L=4Ω I_{B1}=- I_{B2}=1A V_{CC}=40V		0.50		μs
t_s	Storage time			1.80		μs
t_f	Fall time			0.60		μs

◆ **h_{FE} classifications**

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

PACKAGE OUTLINE

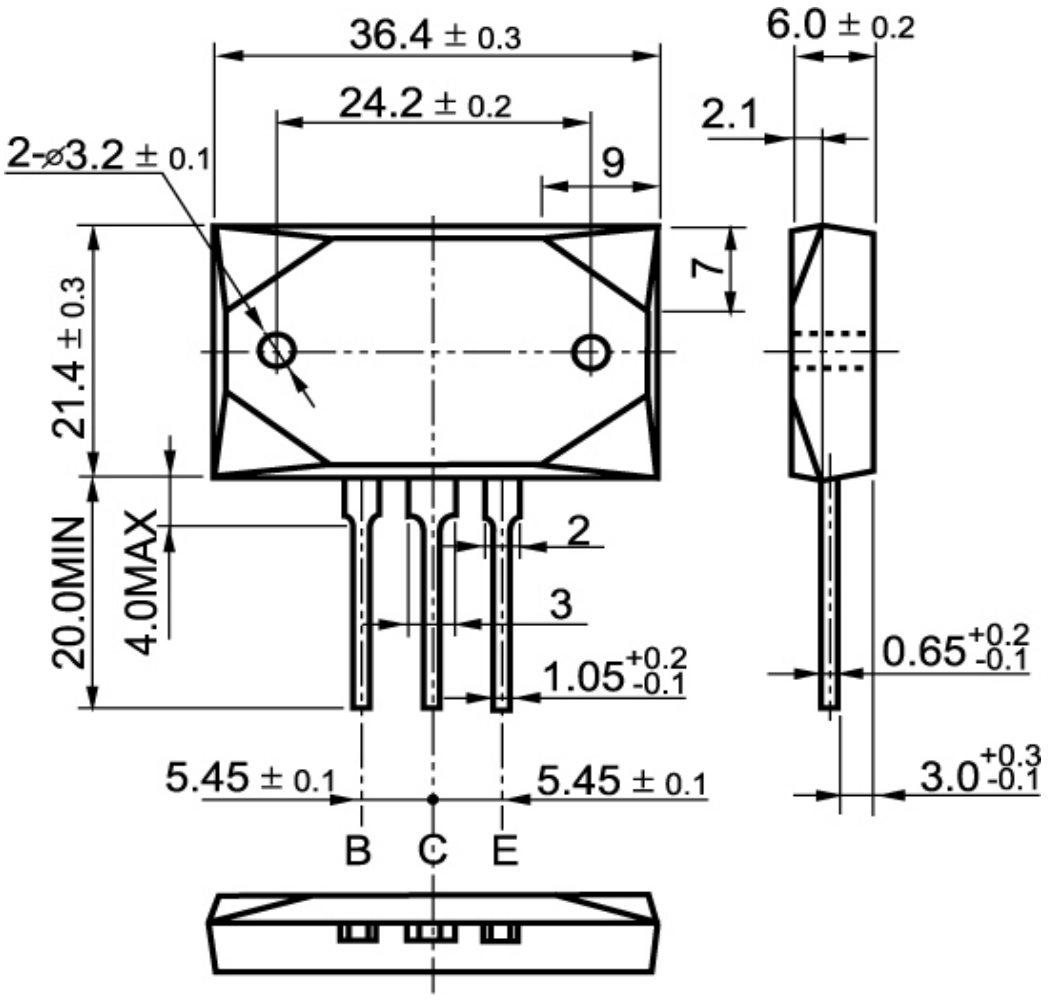

Fig.2 Outline dimensions

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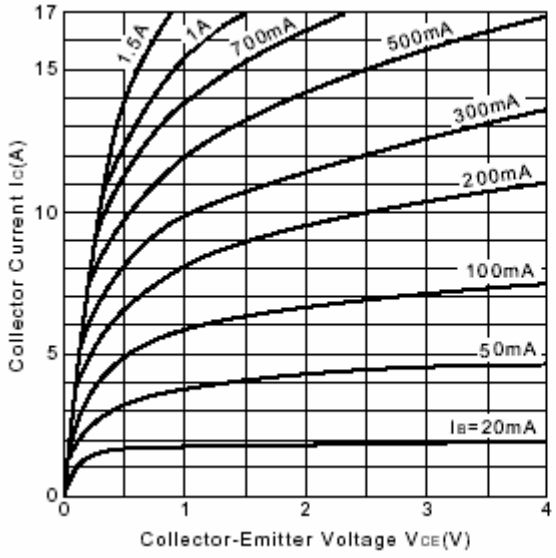

Fig.3 Static Characteristic

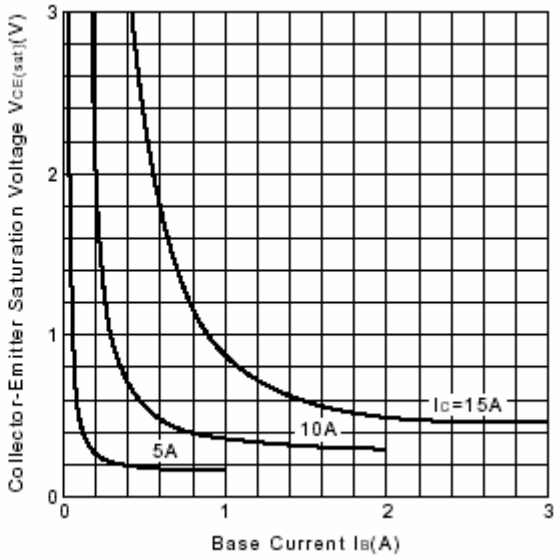

Fig.4 $V_{CE}(sat)-I_B$ Characteristics

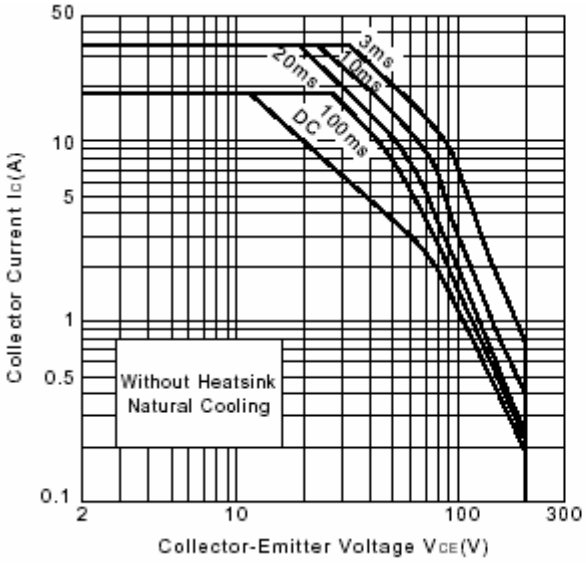

Fig.5 Safe Operating Area

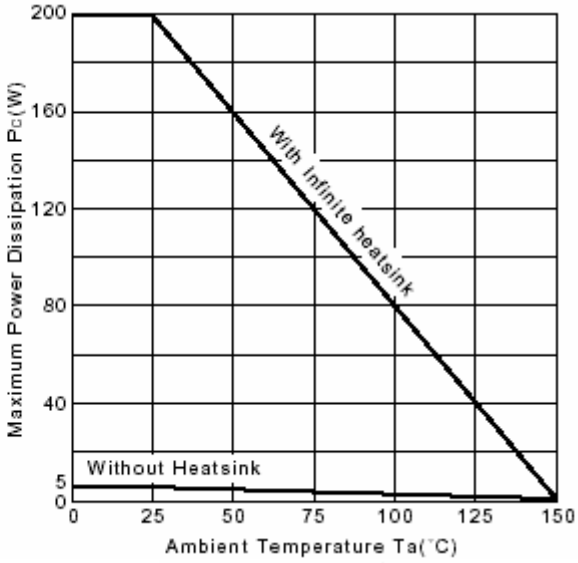

Fig.6 Pc-Ta Derating

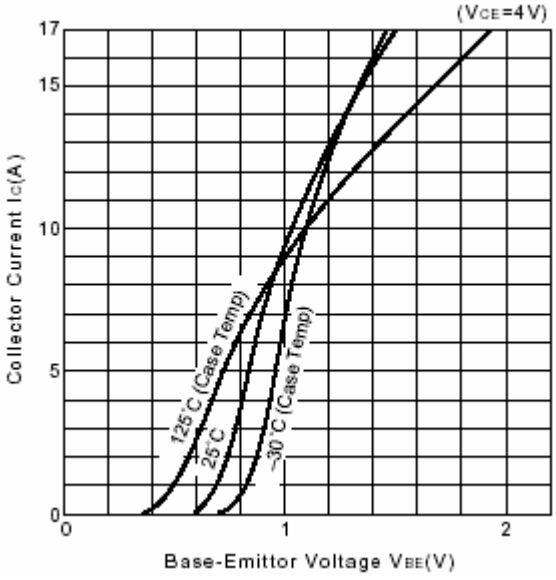

Fig.7 I_C-V_{BE}

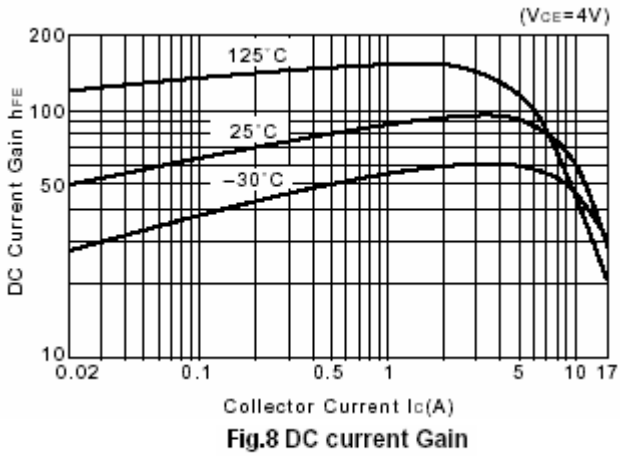

Fig.8 DC current Gain