Silicon NPN Power Transistors 2SD1138

DESCRIPTION

·With TO-220C package
·Complement to type 2SB861

APPLICATIONS

·Low frequency high voltage power amplifier TV vertical deflection output

PINNING

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

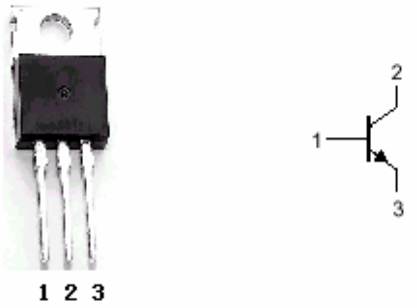

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	200	V
V_{CEO}	Collector-emitter voltage	Open base	150	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		2	A
I_{CP}	Collector current-peak		5	A
P_C	Collector power dissipation	T_a=25□	1.8	W
		T_C=25□	30	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-45~150	□

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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; R_{BE}=∞	150			V
$V_{(BR)EBO}$	Emitter-base breakdown votage	I_E=5mA; I_C=0	6			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=0.5 A;I_B=50m A			3.0	V
V_{BE}	Base-emitter voltage	I_C=50mA ; V_{CE}=4V			1.0	V
I_{CBO}	Collector cut-off current	V_{CB}=120V; I_E=0			1	μA
h_{FE-1}	DC current gain	I_C=50mA ; V_{CE}=4V	60		320	
h_{FE-2}	DC current gain	I_C=0.5A ; V_{CE}=10V	60			
C_{OB}	Output capacitance	I_E=0 ;V_{CB}=100V,f=1MHz		20		pF

◆ **h_{FE-1} classifications**

B	C	D
60-120	100-200	160-320

PACKAGE OUTLINE

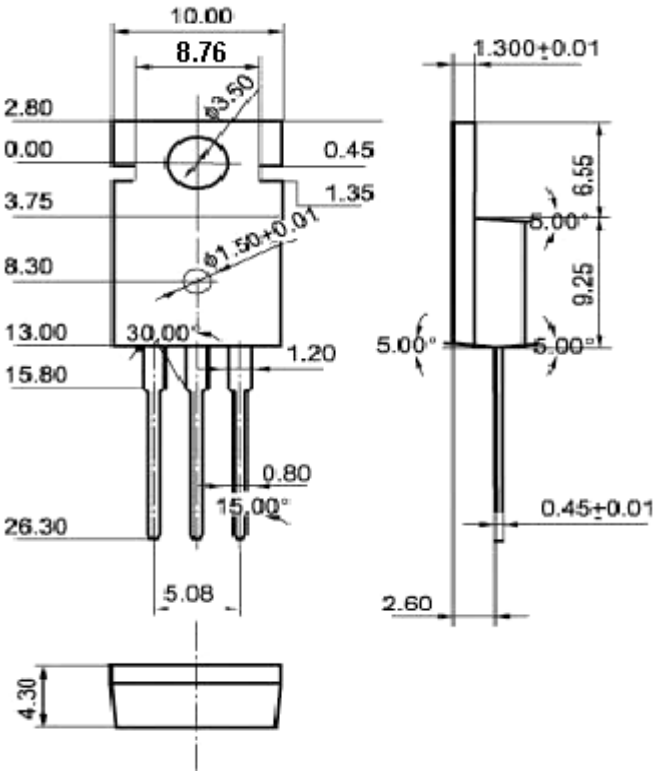

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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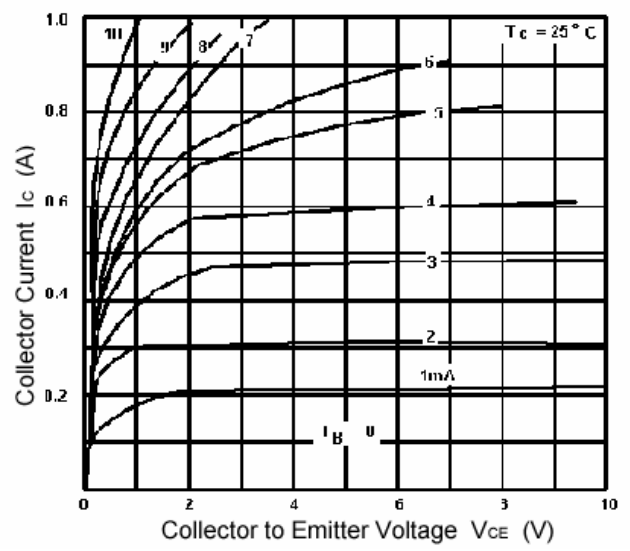

Fig.3 Static Characteristic

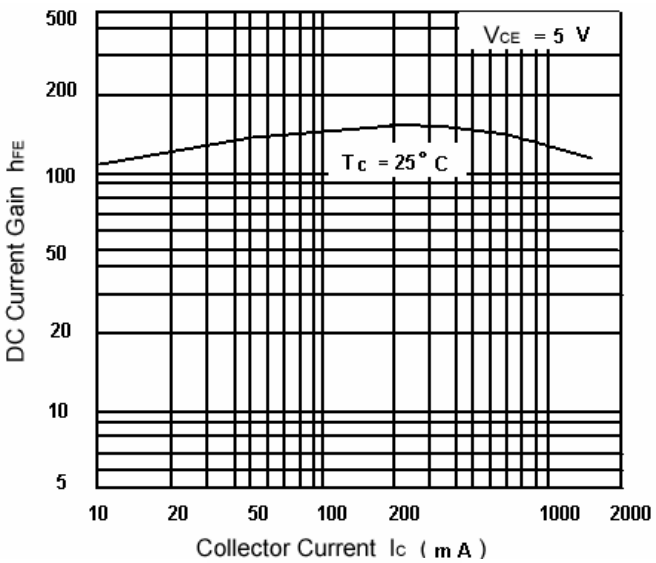

Fig.4 DC current Gain

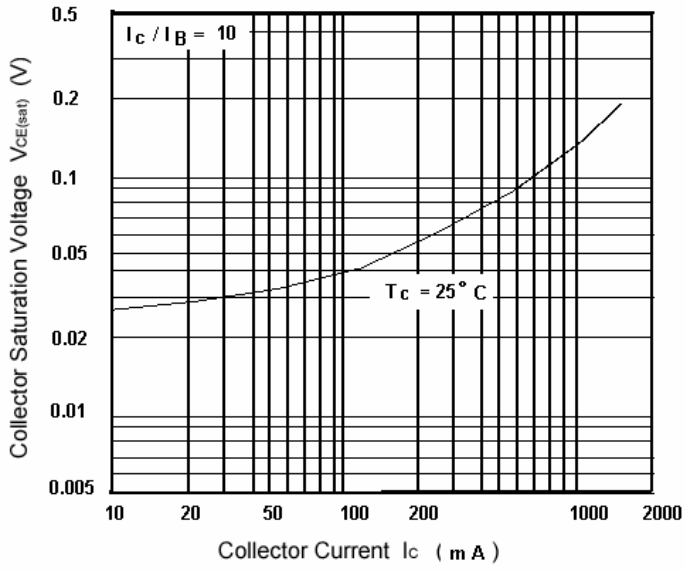

Fig.5 Collector-Emitter Saturation Voltage

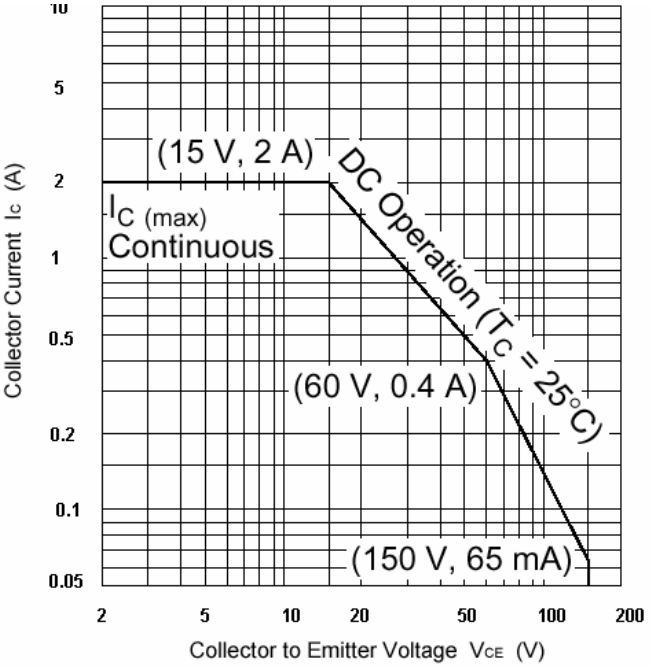

Fig.6 Safe Operating Area