Silicon NPN Power Transistors 2SD1913

DESCRIPTION

·With TO-220F package
·Complement to type 2SB1274
·High reliability.
·High breakdown voltage
·Low saturation voltage.
·Wide area of safe operation

APPLICATIONS

·60V/3A low-frequency power amplifier
·General power amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

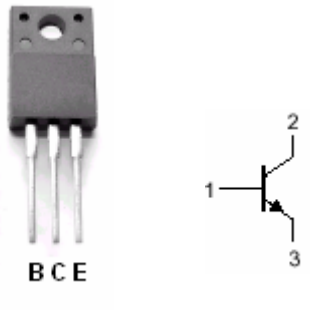


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	60	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		3	A
I_{CM}	Collector current-peak		8	A
P_C	Collector dissipation	T_C=25□	20	W
			2	
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
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA; I_E=0	60			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=5mA; R_{BE}=∞	60			V
$V_{(BR)EBO}$	Base-emitter breakdown voltage	I_E=1mA; I_C=0	6			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A ; I_B=0.2A		0.4	1.0	V
V_{BE}	Base-emitter voltage	I_C=0.5A ; V_{CE}=5V		0.8	1.0	V
I_{CBO}	Collector cut-off current	V_{CB}=40V;I_E=0			0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=4V;I_C=0			0.1	mA
h_{FE-1}	DC current gain	I_C=0.5A ; V_{CE}=5V	70		280	
h_{FE-2}	DC current gain	I_C=3A ; V_{CE}=5V	20			
f_T	Transition frequency	I_C=0.5A ; V_{CE}=5V		100		MHz
Cob	Output capacitance	I_E=0 ; V_{CB}=10V; f=1MHz		40		pF

◆ **h_{FE-1} classifications**

Q	R	S
70-140	100-200	140-280

PACKAGE OUTLINE

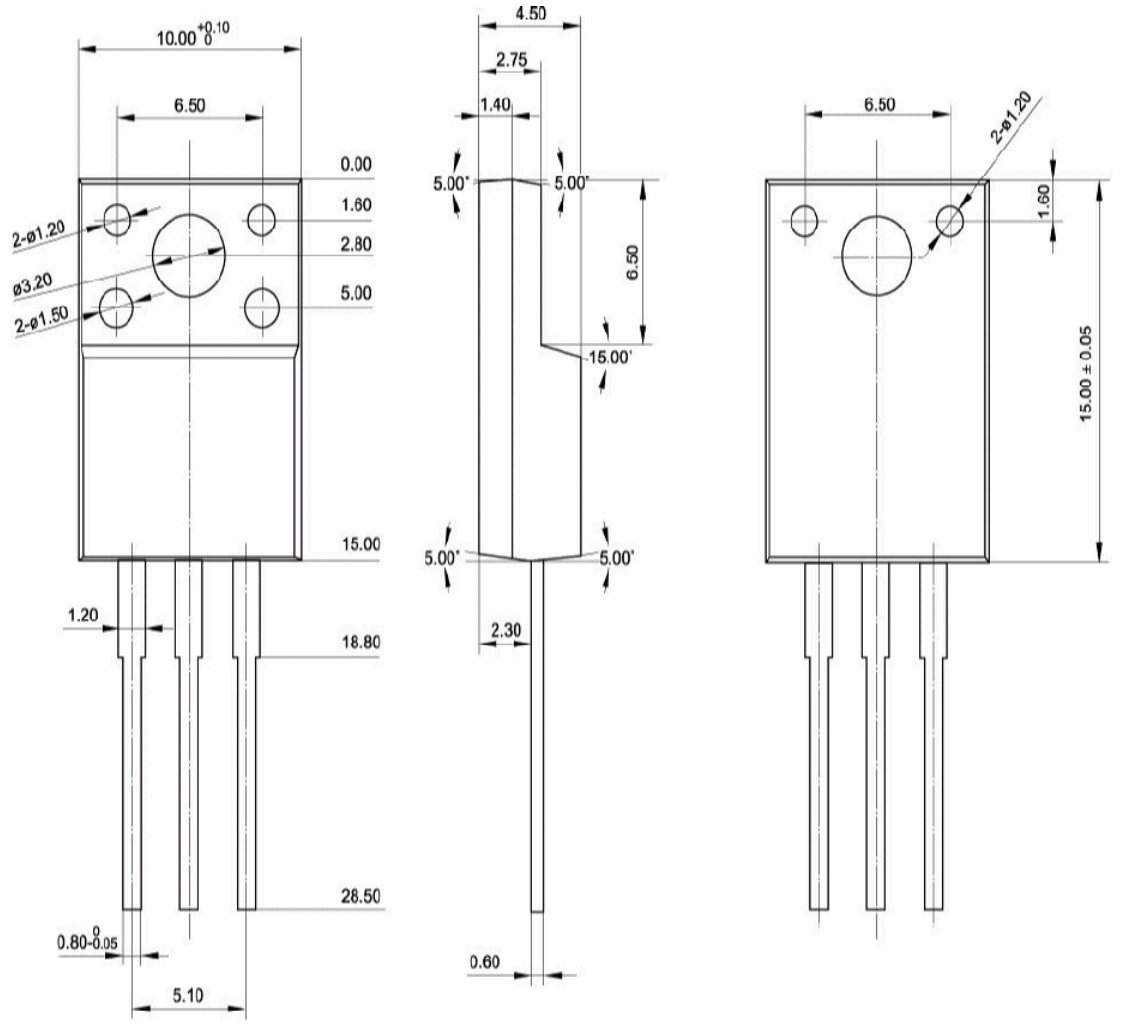


Fig.2 Outline dimensions

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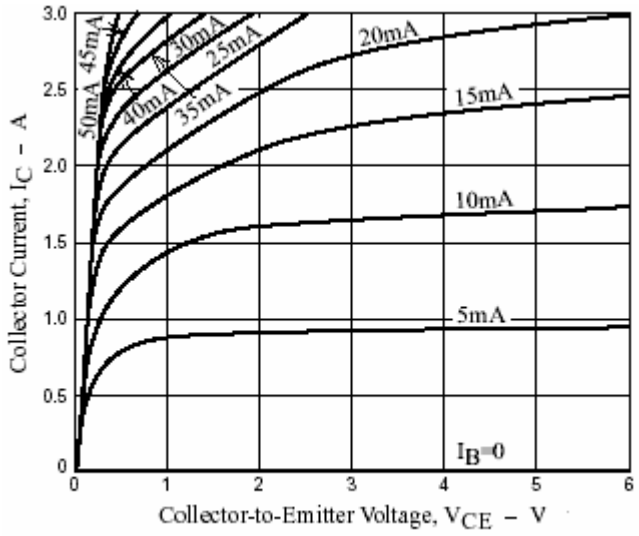


Fig.3 Static Characteristic

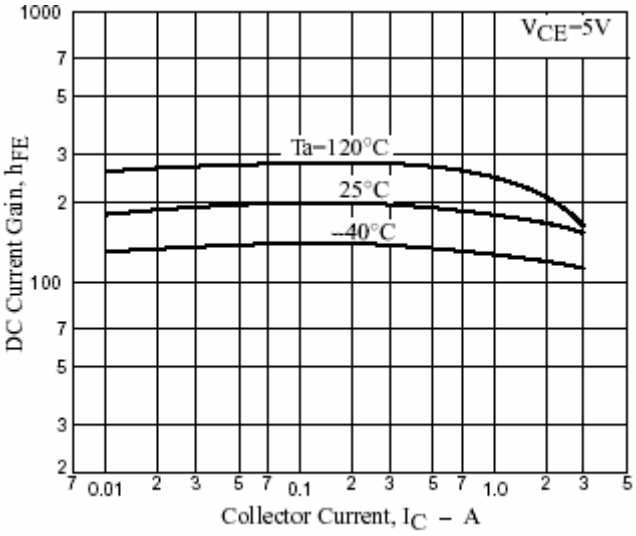


Fig.4 DC current Gain

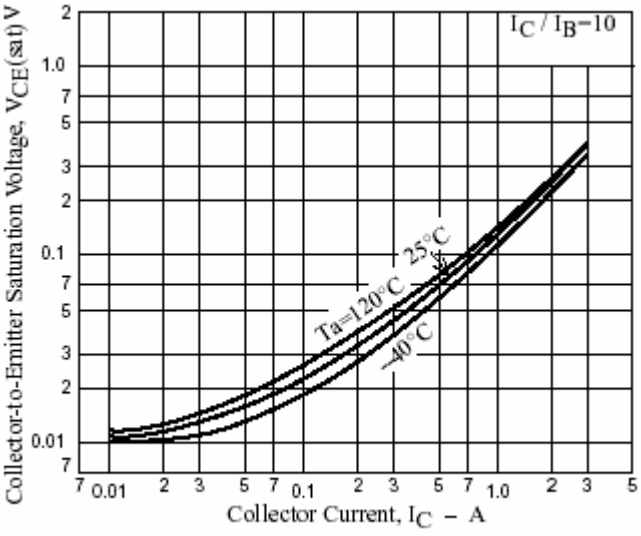


Fig.5 Collector-Emitter Saturation Voltage

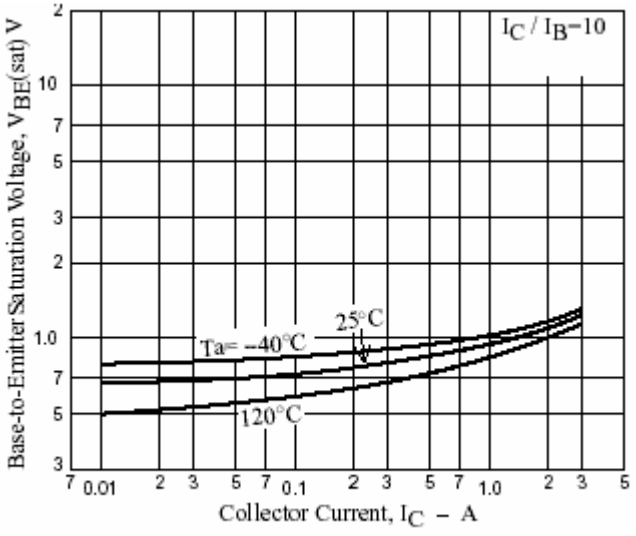


Fig.6 Base-Emitter Saturation Voltage

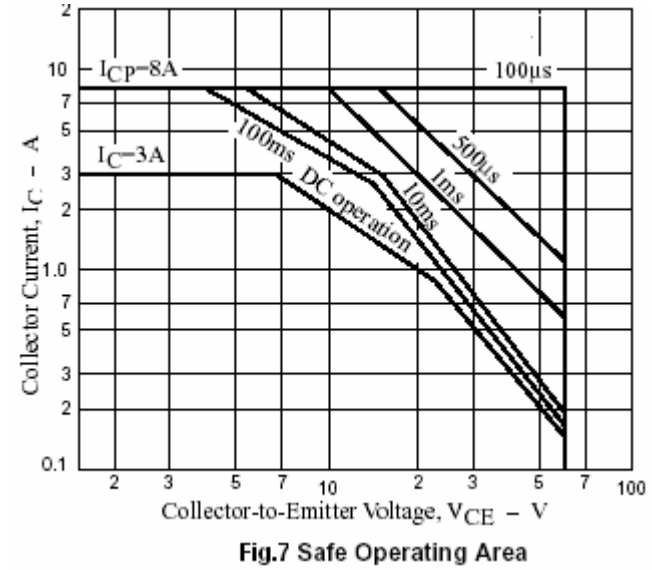


Fig.7 Safe Operating Area