Silicon NPN Power Transistors 2SD600 2SD600K

DESCRIPTION

·With TO-126 package
·Complement to type 2SB631/631K
·High breakdown voltage V_{CEO}100/120V
·High current 1A
·Low saturation voltage

APPLICATIONS

·For low-frequency power amplifier applications

PINNING

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

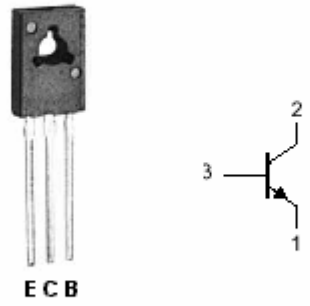

Fig.1 simplified outline (TO-126) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD600	Open emitter	100	V
		2SD600K		120	
V_{CEO}	Collector-emitter voltage	2SD600	Open base	100	V
		2SD600K		120	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current (DC)			1	A
I_{CM}	Collector current-peak			2	A
P_D	Total power dissipation		T_a=25□	1	W
			T_C=25□	8	
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	2SD600	I_C=1mA; R_{BE}=∞	100			V
		2SD600K		120			
$V_{(BR)CBO}$	Collector-base breakdown voltage	2SD600	I_C=10μA ;I_E=0	100			V
		2SD600K		120			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		I_E=10μA ;I_C=0	5			V
V_{CEsat}	Collector-emitter saturation voltage		I_C=0.5A ;I_B=50mA			0.4	V
V_{BEsat}	Base-emitter saturation voltage		I_C=0.5A ;I_B=50mA			1.2	V
I_{CBO}	Collector cut-off current		V_{CB}=50V; I_E=0			1	μA
I_{EBO}	Emitter cut-off current		V_{EB}=4V; I_C=0			1	μA
h_{FE-1}	DC current gain		I_C=50mA ; V_{CE}=5V	60		320	
h_{FE-2}	DC current gain		I_C=0.5A ; V_{CE}=5V	20			
f_T	Transition frequency		I_C=50mA ; V_{CE}=10V		130		MHz
C_{OB}	Collector output capacitance		f=1MHz ; V_{CB}=10V		20		pF

Switching times

t_f	Fall time	I_C=500mA ; V_{CE}=12V I_{B1}=-I_{B2}=50mA		0.1		μs
t_{off}	Turn-off time			0.5		μs
t_{stg}	Storage time			0.7		μs

◆ **h_{FE-1} Classifications**

D	E	F
60-120	100-200	160-320

PACKAGE OUTLINE

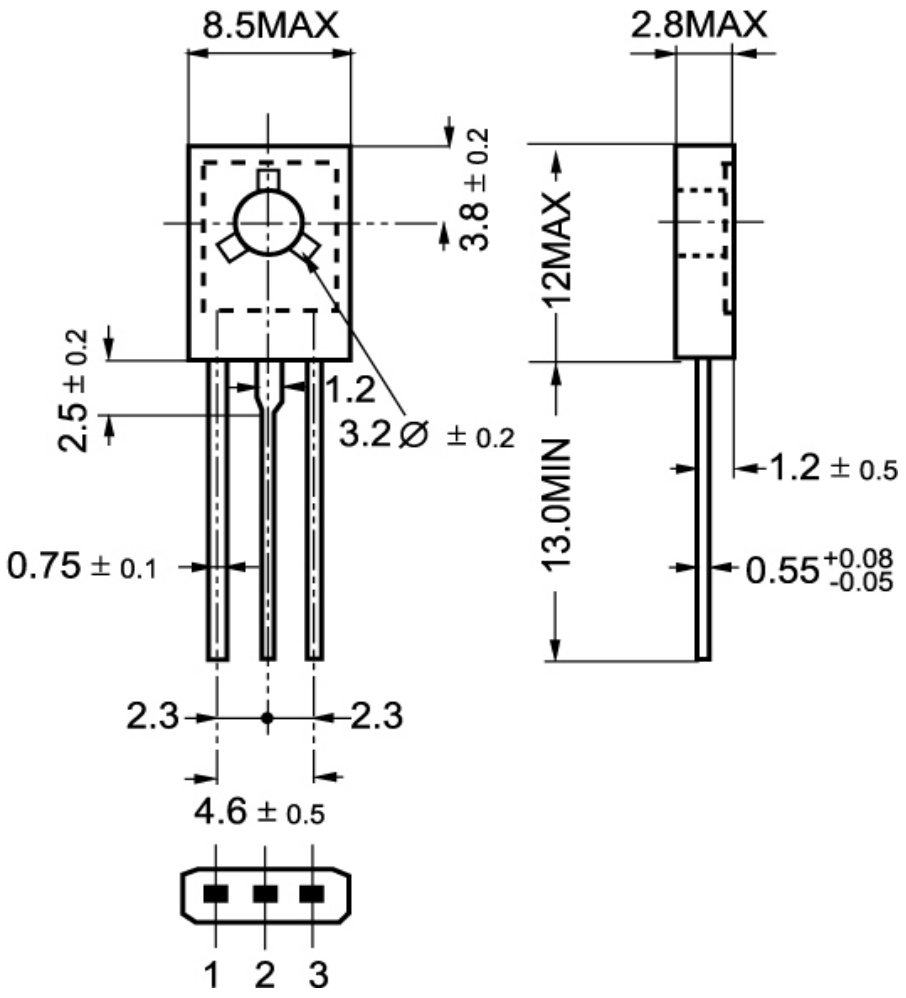

Fig.2 Outline dimensions

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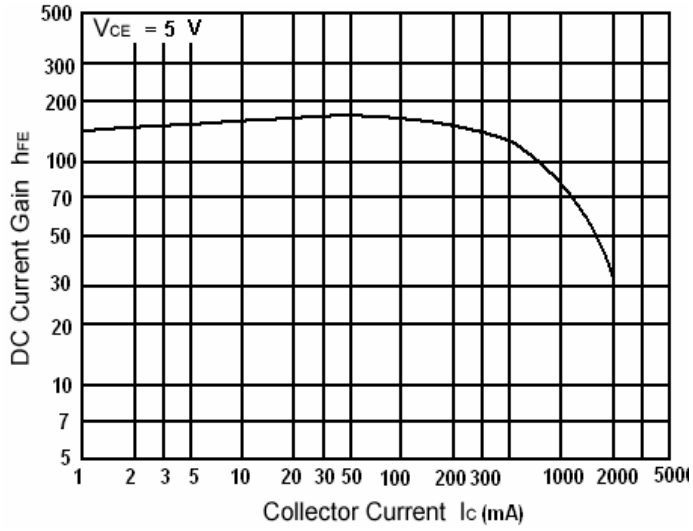

Fig.3 DC current Gain

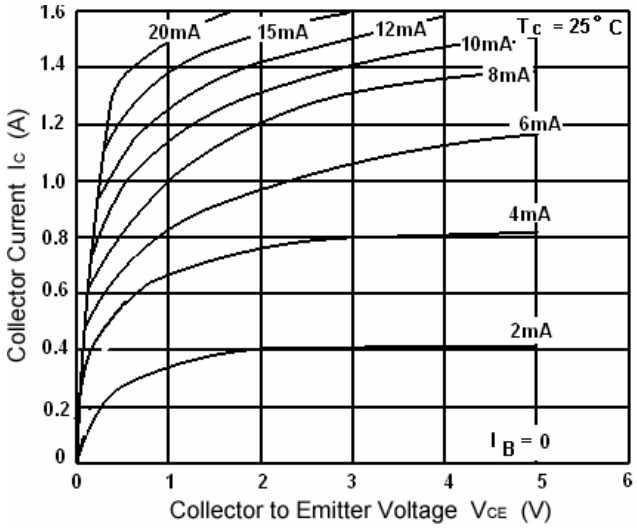

Fig.4 Static Characteristic

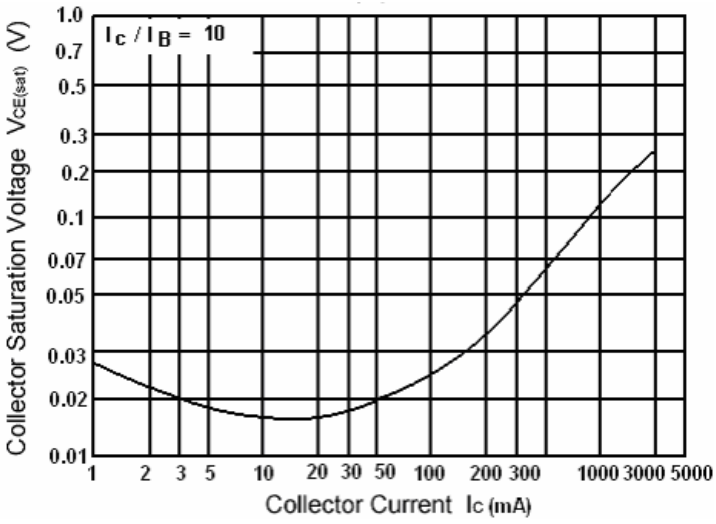

Fig.5 Collector-Emitter Saturation Voltage

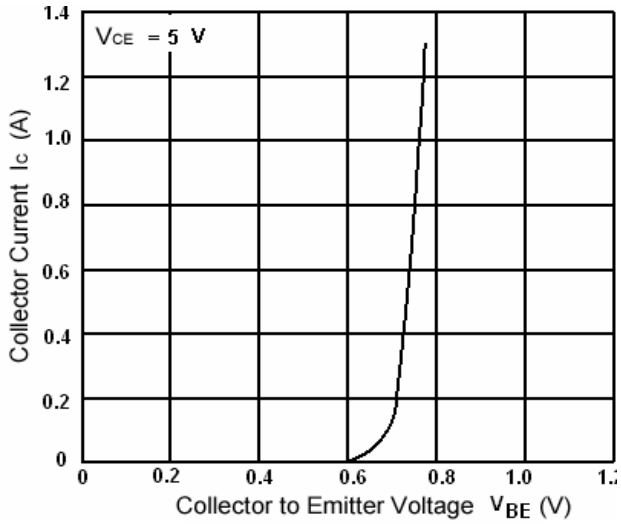

Fig.6 Base-Emitter On Voltage

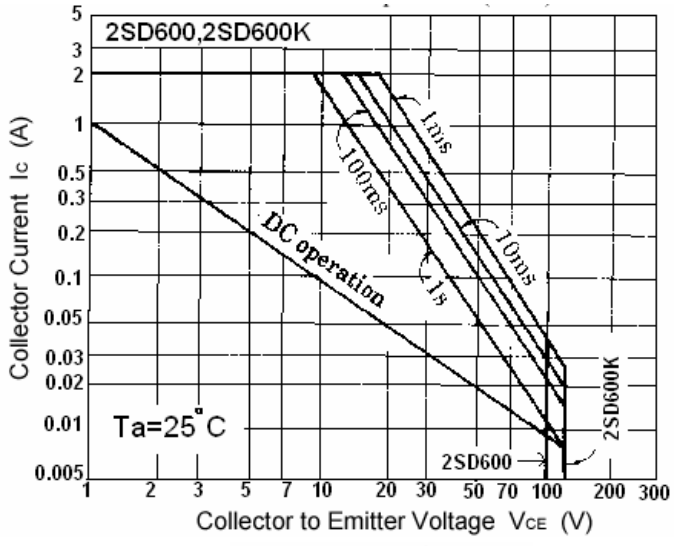

Fig.7 Safe Operating Area