PNP Epitaxial Planar Silicon Transistors

General Description

The 2SB1202 is PNP silicon power transistor,Designed for general purpose amplifier and low speed switching applications.

Product Summary

VCBO	VCEO	IC
-60V	-50V	-3A

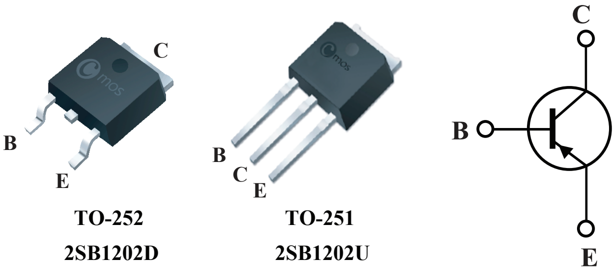
Applications

- Ideal for Medium Power Switching

Features

- Epitaxial Planar Die Construction
- Low Collector-Emitter Saturation Voltage
- RoHS Compliant

TO-252/251 Pin Configuration



TO-252
2SB1202D

TO-251
2SB1202U

Absolute Maximum Ratings(Ta = 25℃

Symbol	Parameter	Rating	Units
V_{CBO}	Collector to Base Voltage	-60	V
V_{CEO}	Collector to Emitter Voltage	-50	V
V_{EBO}	Emitter−Base Voltage	-6	V
I_C	Collector Current	-3	A
I_{CP}	Collector Current (Pulse)	-6	A
P_C	Collector Dissipation(T_C=25℃)	20	W
T_{STG}	Storage Temperature Range	-55 to 150	℃
T_J	Junction Temperature	150	℃

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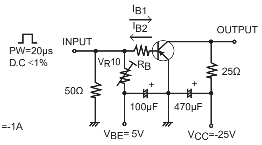
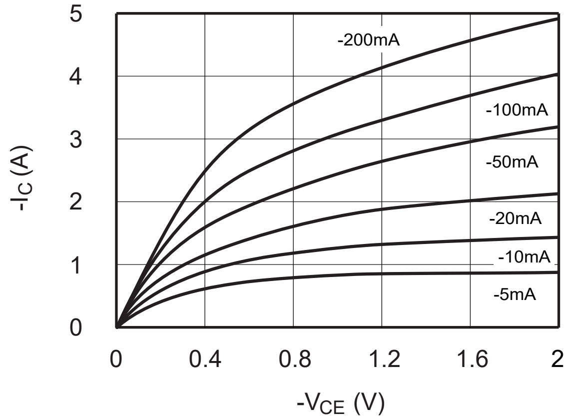
Electrical Characteristics (T_a =25℃

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB}=-40V, I_E=0A			-1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-5V, I_C=0A			-1	μA
DC Current Gain	h_{FE}	V_{CE}=-2V, I_C=-5mA	100*		560*	
Gain-Bandwidth Product	f_T	V_{CE}=-5V, I_C=-1A		150		MHz
Output Capacitance	C_{ob}	V_{CB}=-10V, f=1MHz		39		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-2A, I_B=-200mA		-0.22	-0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-1A, I_B=-100mA		-0.9	-1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-2mA , I_E=0A	-60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-2mA, R_{BE}=∞	-50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0A	-6			V
Turn-ON Time	t_{on}	 $-10I_{B1} = 10I_{B2} = I_C = -1A$		70		ns
Storage Time	t_{stg}			450		ns
Fall Time	t_f			35		ns

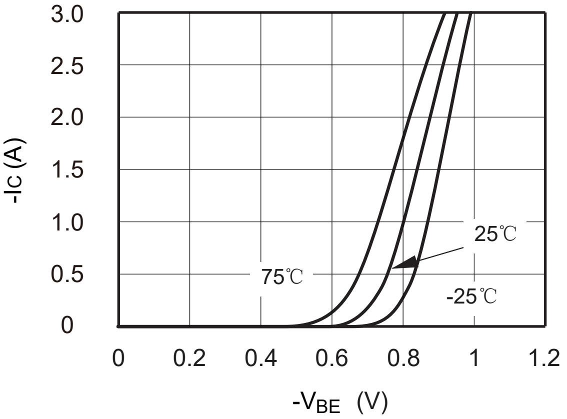
*The 2SB1202 are classified by 100mA h_{FE} as follows :

Rank	Q	R	S	T
h_{FE}	100 to 200	140 to 280	200 to 400	280 to 560

Typical Characteristics



Grounded emitter output characteristics



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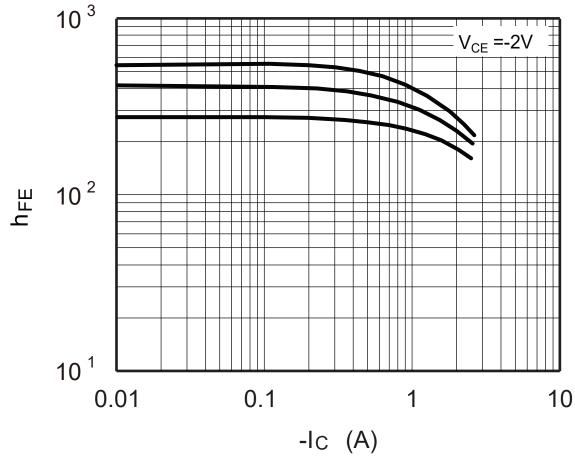
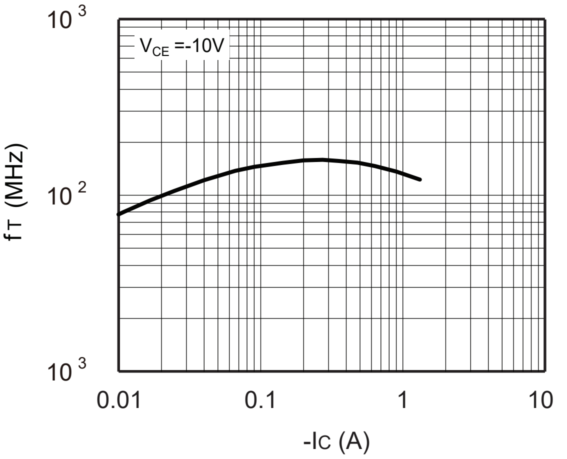
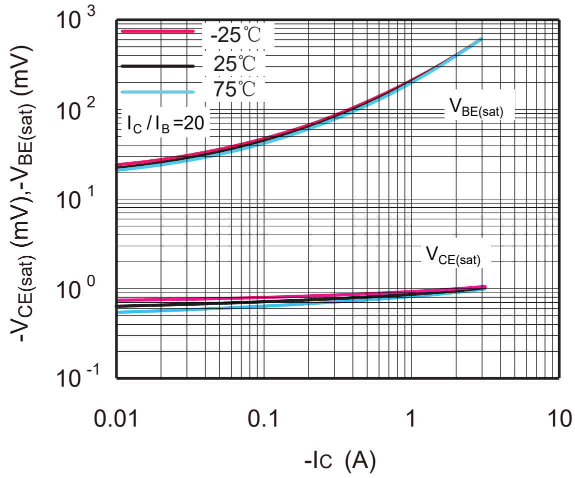
Grounded emitter propagation characteristics



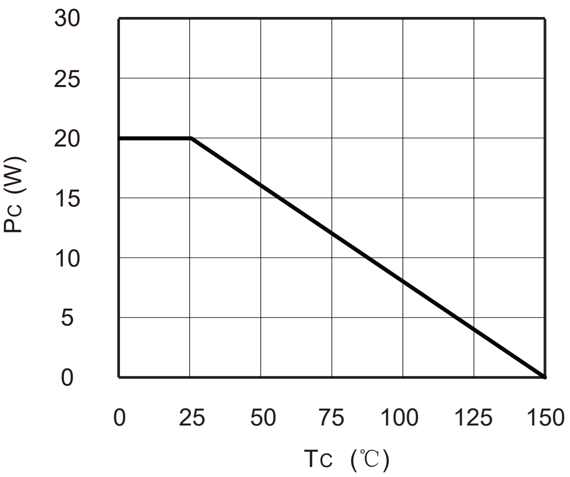
DC current gain vs. collector current



Gain bandwidth product vs. emitter current



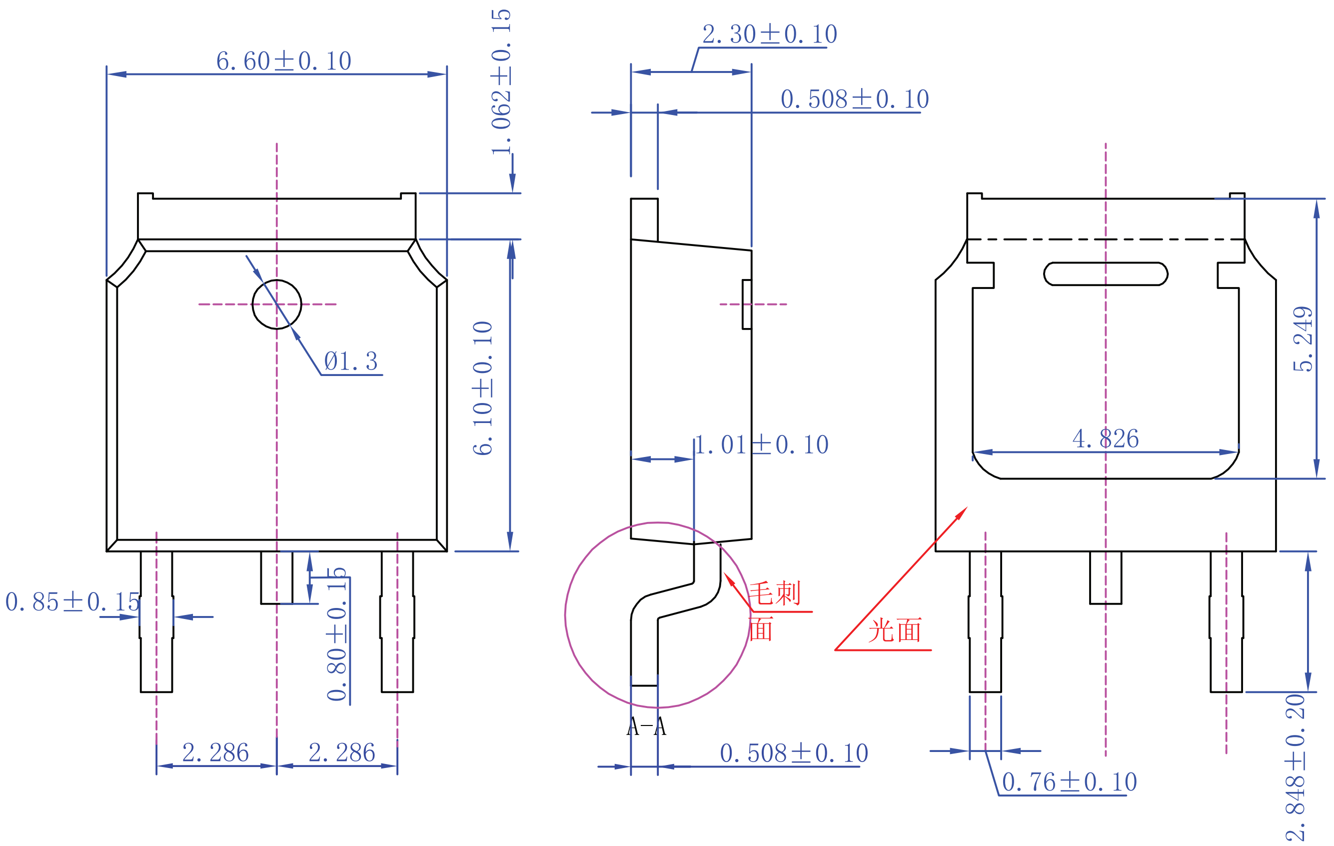
Collector-emitter saturation voltage vs. collector current
Base-emitter saturation voltage vs. collector curren

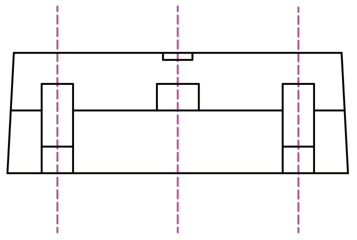


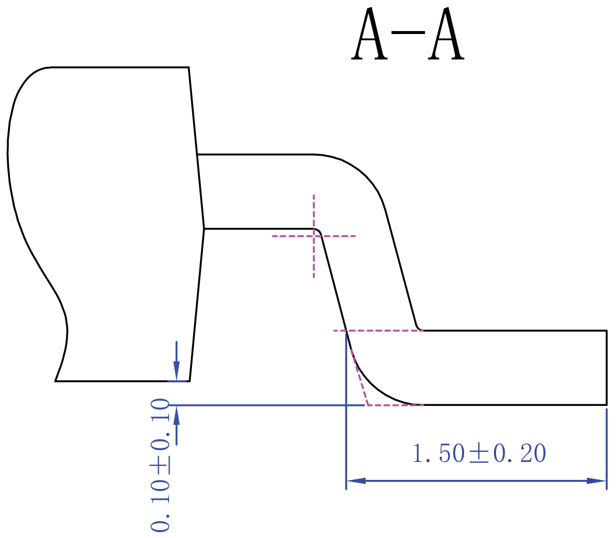
Maximum Collector Dissipation Curve

Package Dimension

TO-252 Unit :mm







注：
1.塑封体未标注为光面Ra=0.1;亚光面Ra=1.0~1.2
2.未注公差±0.15未标注圆角R max=0.25
3.塑封体无缺损、缩孔、裂纹、气泡等不良缺陷
4.标注单位mm
5.顶针孔不允许凸出塑封体表面

Package Dimension

TO-251A Unit :mm