



DESCRIPTION

The S8050 is available in SOT-23 package.

ORDERING INFORMATION

Package Type	Part Number
SOT-23	S8050
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

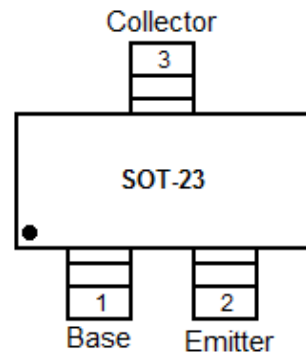
FEATURES

- High collector current ($I_C = 500\text{mA}$)
- Excellent h_{FE} Linearity
- High total power dissipation. ($P_C = 300\text{mW}$)
- Available in SOT-23 package

APPLICATION

- High Collector Current

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified

V _{CB0} , Collector-Base Voltage	40V
V _{CEO} , Collector-Emitter Voltage	25V
V _{EBO} , Emitter-Base Voltage	5V
I _C , Collector Current-Continuous	500mA
P _C , Collector Dissipation	300mW
T _J , T _{STG} , Junction and Storage Temperature	-55°C~150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	40	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =0.1mA, I _B =0	25	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5	-	-	V
Collector Cut-off Current	I _{CBO}	V _{CB} =40V, I _E =0	-	-	0.1	μA
Collector Cut-off Current	I _{CEO}	V _{CE} =20V, I _B =0	-	-	0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} =5V, I _C =0	-	-	0.1	μA
DC Current Gain	h _{FE}	V _{CE} =1V, I _C =50mA	200	-	350	
		V _{CE} =1V, I _C =500mA	50	-	-	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA	-	-	0.6	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =500mA, I _B =50mA	-	-	1.2	V
Transition Frequency	f _T	V _{CE} =6V, I _C =20mA, f=30MHz	150	-	-	MHz



TYPICAL CHARACTERISTICS

Figure 1. Static Characteristic

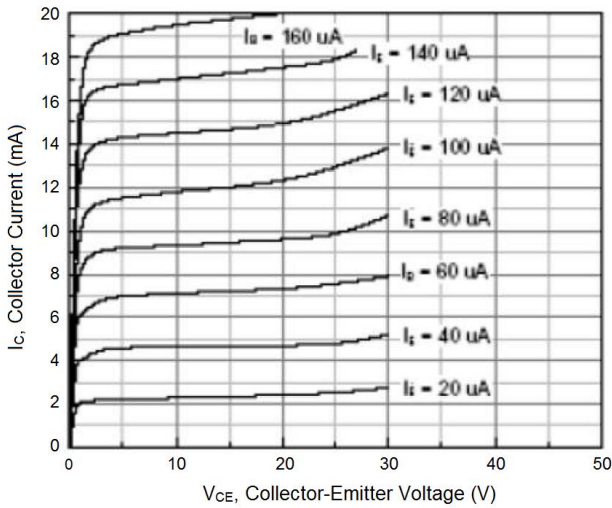


Figure 2. DC Current Gain

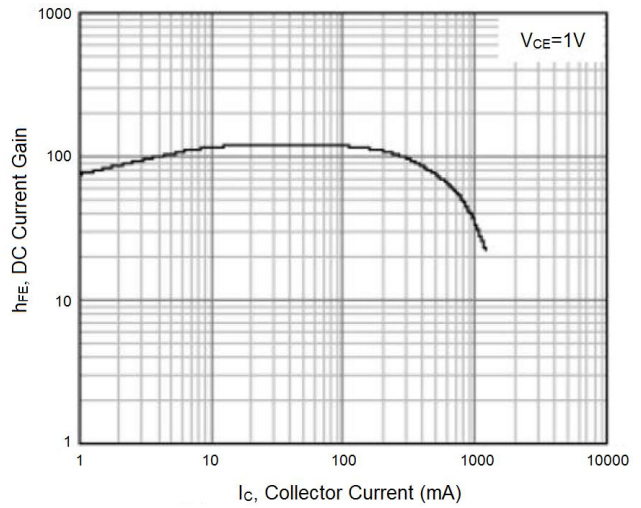


Figure 3. Base-Emitter Saturation Voltage
Collector -Emitter Saturation Voltage

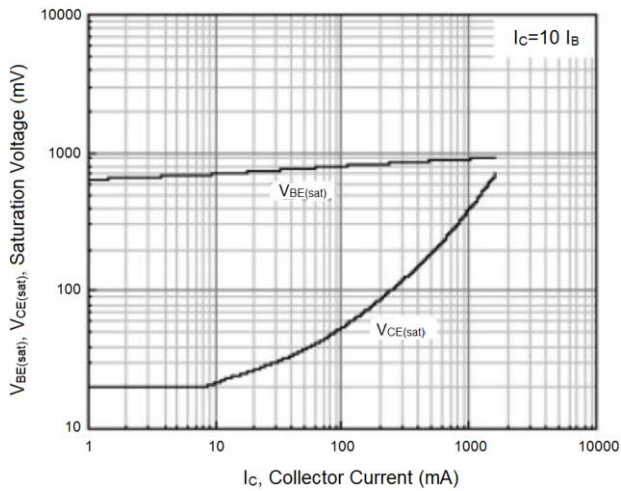
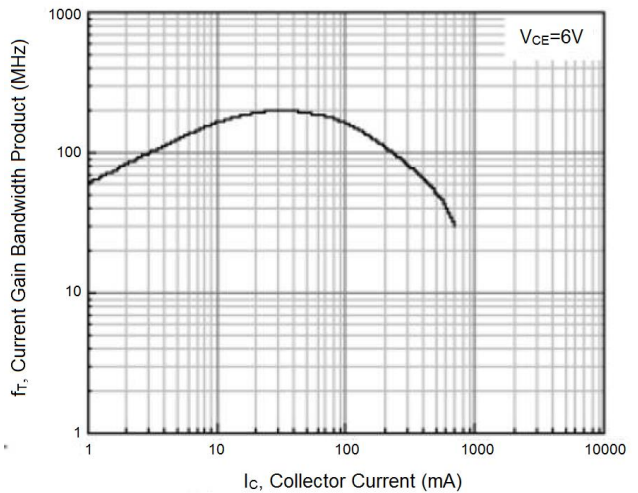


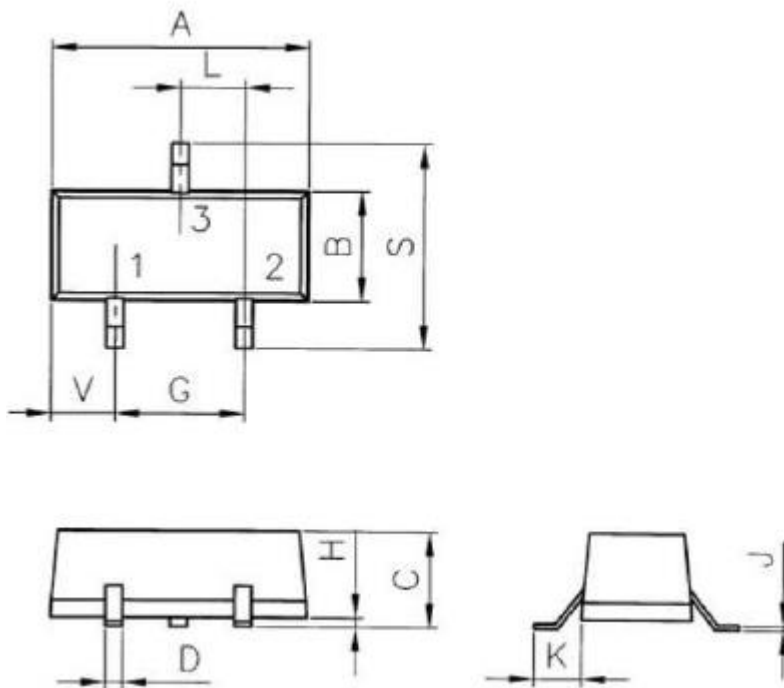
Figure 4. Current Gain Bandwidth Product





PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



Symbol	MIN	MAX
A	2.80	3.04
B	1.20	1.40
C	0.89	1.13
D	0.30	0.50
G	1.78	2.04
H	0.01	0.10
J	0.08	0.18
K	0.45	0.60
L	0.89	1.02
S	2.10	2.50
V	0.42	0.60



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