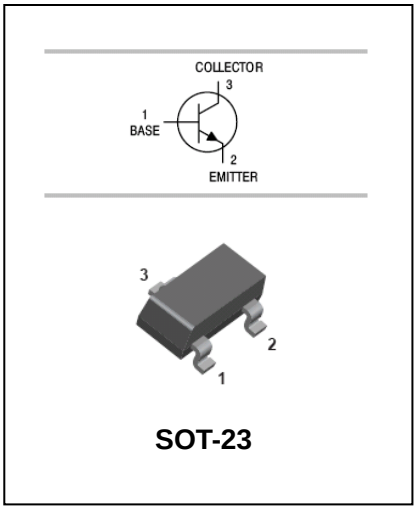
Silicon Epitaxial Planar Transistor **M8050**

FEATURES

HF

- High Collector Current (I_C= 800mA)
- Complementary To M8550
- Excellent H_{FE} Linearity
- High total power dissipation (P_C=200mW)
- RoHS compliant with Halogen-free



SOT-23

APPLICATIONS

- High Collector Current

ORDERING INFORMATION

Type No.	Marking	Package Code
M8050-L	Y11	SOT-23
M8050-H	Y11	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	800	mA
P_C	Collector Dissipation	200	mW
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	℃

Silicon Epitaxial Planar Transistor **M8050**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	**Symbol**	**Test 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	6			V
Collector cut-off current	I_{CBO}	V_{CB}=35V,I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=20V,I_B=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=1V,I_C=5mA V_{CE}=1V,I_C=100mA V_{CE}=1V,I_C=800mA	45 80 40		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=800mA, I_B=80mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=800mA, I_B=80mA			1.2	V
Transition frequency	f_T	V_{CE}=6V, I_C= 20mA f=30MHz	150			MHz

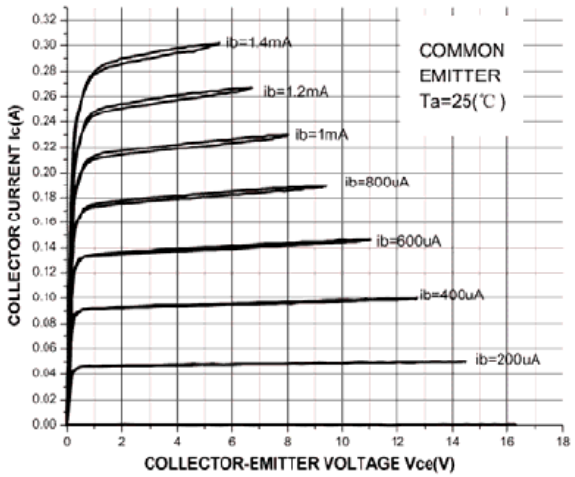
CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H
Range	80-200	200-300

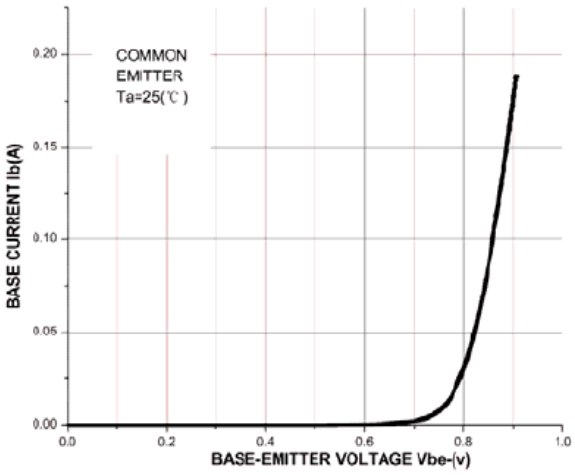
Silicon Epitaxial Planar Transistor **M8050**

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

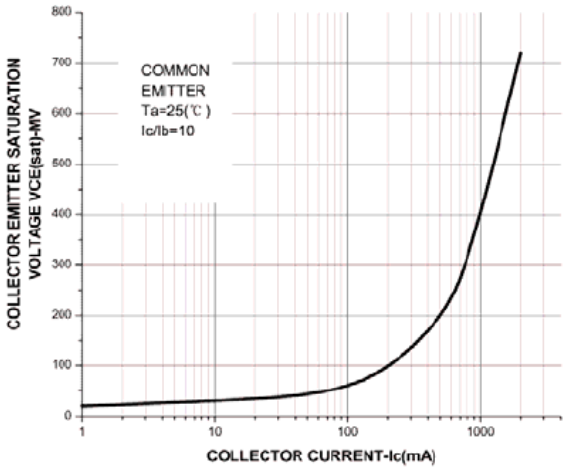
Ic-Vce



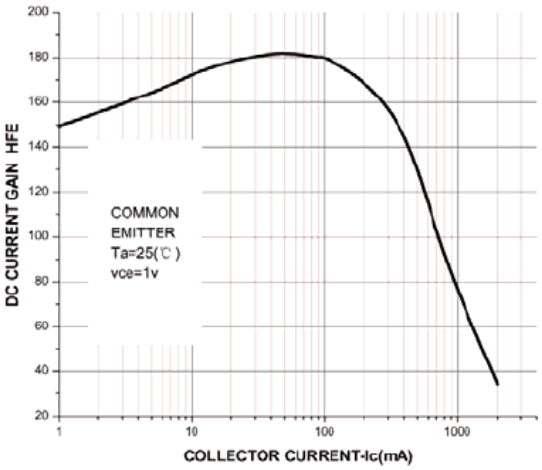
Ib-Vbe



Vcesat-Ic



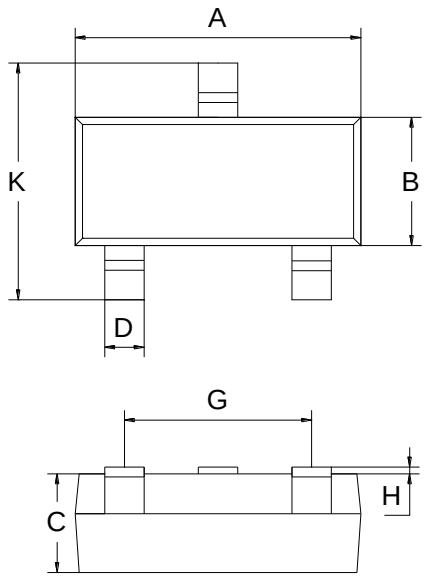
hFE-Ic



Silicon Epitaxial Planar Transistor **M8050**

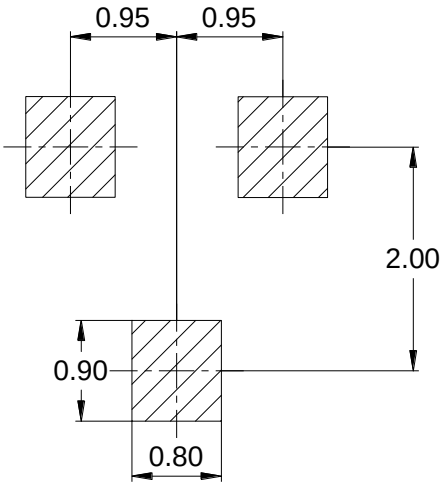
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
M8050	SOT-23	3000pcs / Tape & Reel