

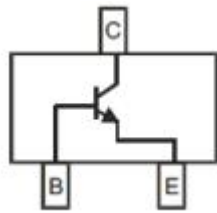
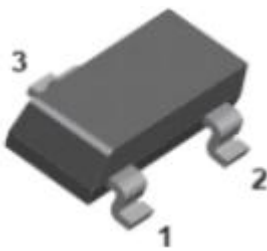
1. Features

- Complementary to MMBT5401
- Power Dissipation of 300mW
- High Stability and High Reliability
- Halogen-free、RoHS Compliant

2. Mechanical Data

- Package Type: SOT-23, Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

3. Symbol



Pin	Function
1	Base
2	Emitter
3	Collector

SOT-23

4. Absolute maximum ratings

($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Rating	Units
Collector-Base voltage	V_{CBO}	180	V
Collector-Emitter voltage	V_{CEO}	160	V
Emitter-Base voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	300	mW
Junction temperature	T_J	150	$^{\circ}\text{C}$
storage temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$
Thermal resistance From junction to ambient	$R_{\theta JA}$	416	$^{\circ}\text{C}/\text{W}$



5. Electrical characteristics

(T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Max	Units
Collector-base breakdown voltage	BVCBO	IC=100uA, IE=0	180	-	V
Collector-emitter breakdown voltage	BVCEO	IC=1mA, IB=0	160	-	V
Emitter-base breakdown voltage	BVEBO	IE=10uA, IC=0	6	-	V
Collector-base cut-off current	ICBO	VCB=120V, IE=0	-	50	nA
Emitter-base cut-off current	IEBO	VEB=4V, IC=0	-	50	nA
DC current gain	hFE1	VCE=5V, IC=1mA	80	-	
	hFE2	VCE=5V, IC=10mA	100	300	
	hFE3	VCE=5V, IC=50mA	30	-	
Collector-emitter saturation voltage	VCE(sat)1	IC=10mA, IB=1mA	-	0.15	V
	VCE(sat)2	IC=50mA, IB=5mA	-	0.20	V
Base -emitter saturation voltage	VBE(sat)1	IC=10mA, IB=1mA	-	1.00	V
	VBE(sat)2	IC=50mA, IB=5mA	-	1.00	V
Transition frequency	f _T	VCE=10V, IC=10mA, f=100MHz	100	300	MHz

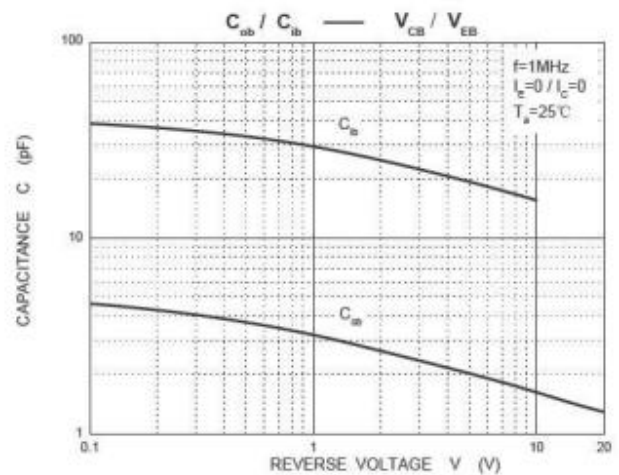
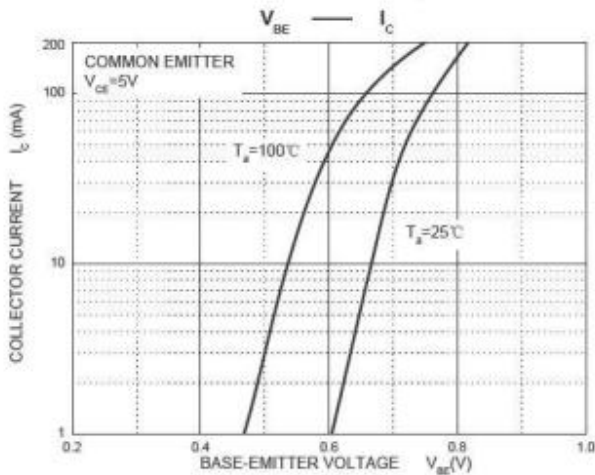
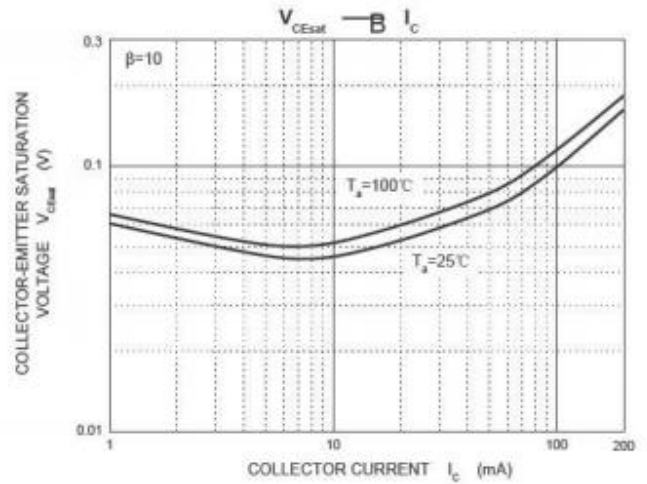
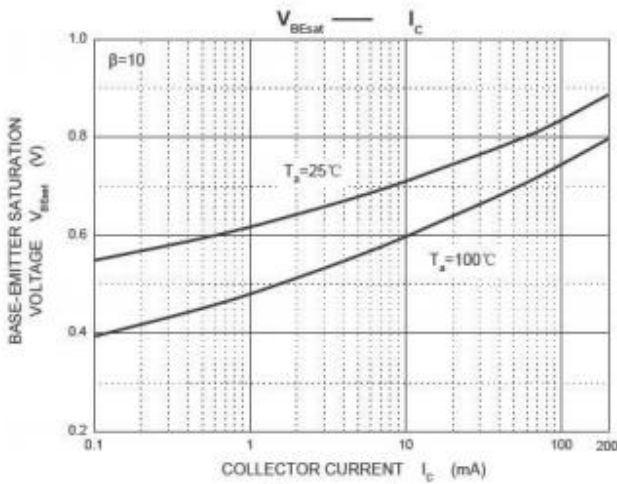
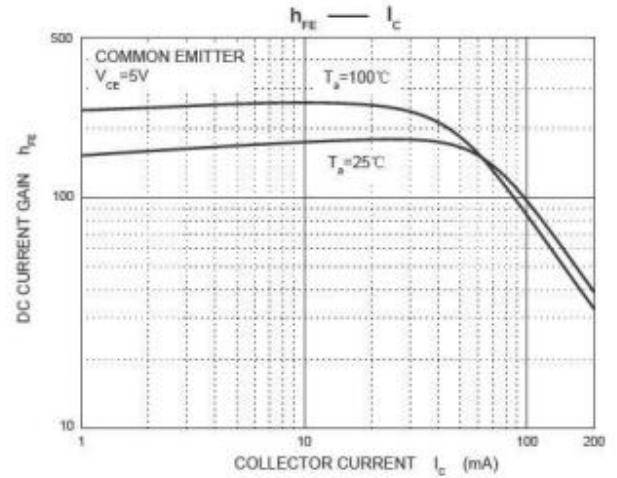
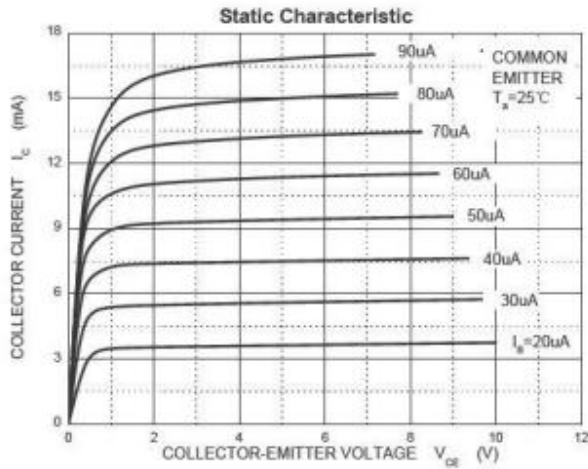
6. Classification of hFE2

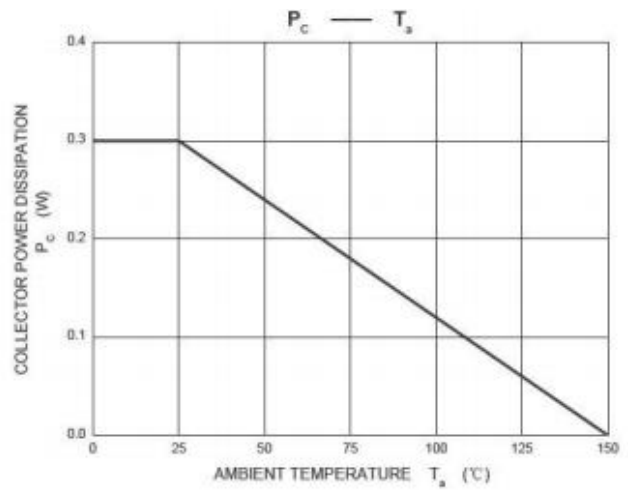
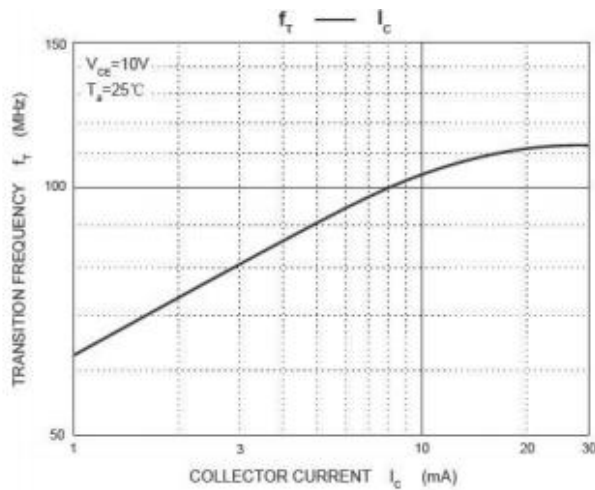
hFE2	100-300	
RANK	L	H
RANGE	100-200	200-300
MARKING	G1	

7. Ordering Information (Example)

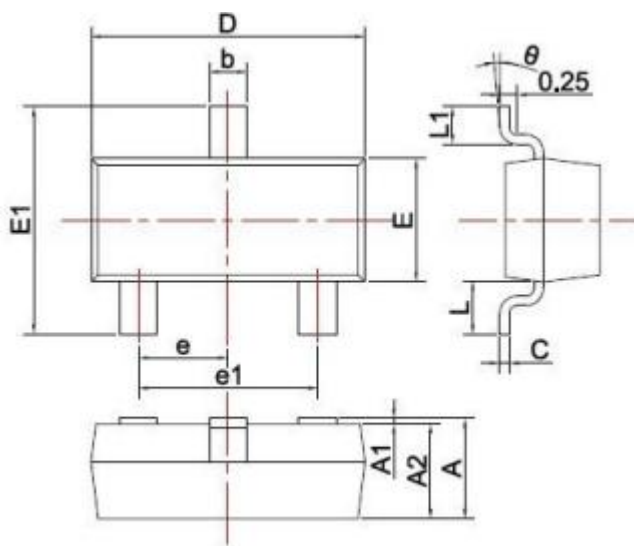
Reel Size	Minimum Package	Inner Box	Outer Carton	Unit Weight
7 Inch	3000pcs	45000pcs	180000pcs	0.008g

8. Typical characteristics





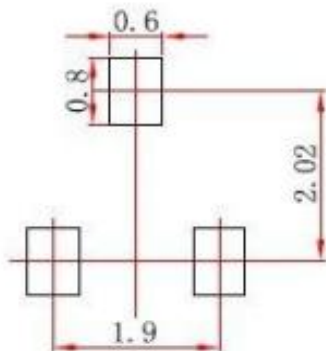
9. Packag Outline Dimensions



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

10. Precautions: PCB Design



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.