

MMBT5551

MMBT5551 SOT-23 Plastic-Encapsulate Transistors(NPN)

General description

SOT-23 Plastic-Encapsulate Transistors(NPN)

FEATURES

- Complementary to MMBT5401
- Power Dissipation of 300mW
- High Stability and High Reliability
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0



DEVICE MARKING CODE:

Device Type	Device Marking
MMBT5551	G1

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	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	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	416	°C/W

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I _C =100uA, I _E =0	180		V
Collector-emitter breakdown voltage	V(BR)CEO *	I _C =1mA, I _B =0	160		V
Emitter-base breakdown voltage	V(BR)EBO	I _E =10uA, I _C =0	6		V
Collector cut-off current	I _{CBO}	V _{CB} =120V, I _E =0		50	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0		50	nA
DC current gain	h _{FE} (1) *	V _{CE} =5V, I _C =1mA	80		
	h _{FE} (2) *	V _{CE} =5V, I _C =10mA	100	300	
	h _{FE} (3) *	V _{CE} =5V, I _C =50mA	30		
Collector-emitter saturation voltage	V _{CE(sat)1} *	I _C =10mA, I _B =1mA		0.15	V
	V _{CE(sat)2} *	I _C =50mA, I _B =5mA		0.20	V
Base -emitter saturation voltage	V _{BE(sat)1} *	I _C =10mA, I _B =1mA		1.00	V
	V _{BE(sat)2} *	I _C =50mA, I _B =5mA		1.00	V
Transition frequency	f _T	V _{CE} =10V, I _C =10mA, f=100MHz	100	300	MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		6	pF

*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%

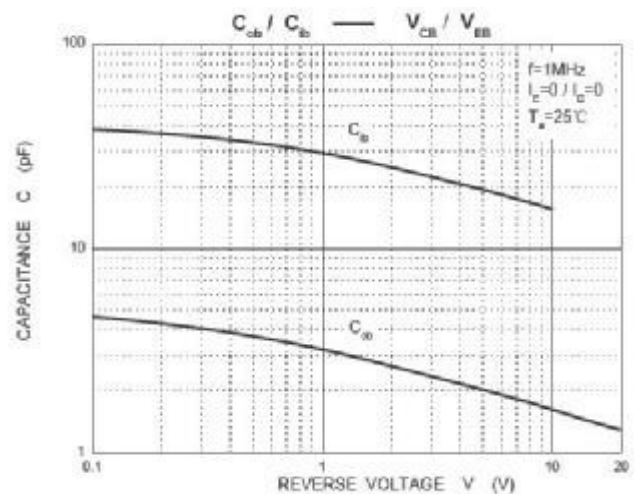
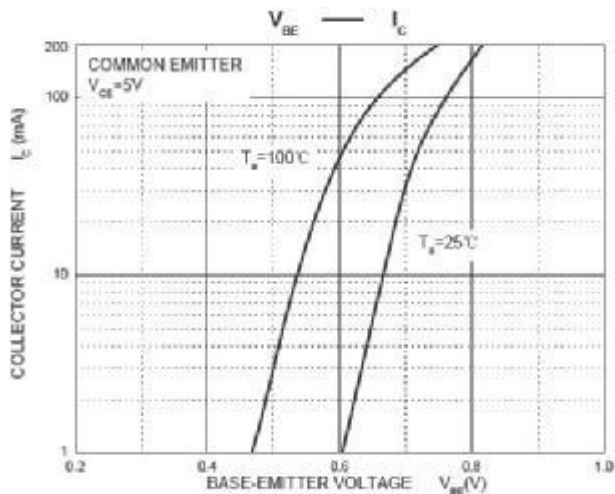
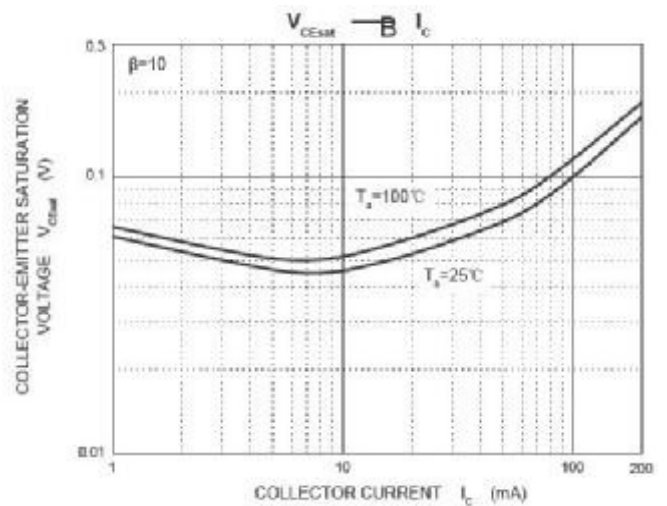
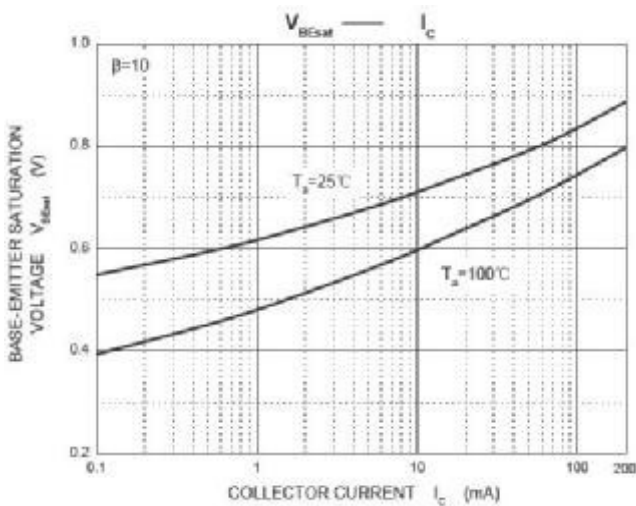
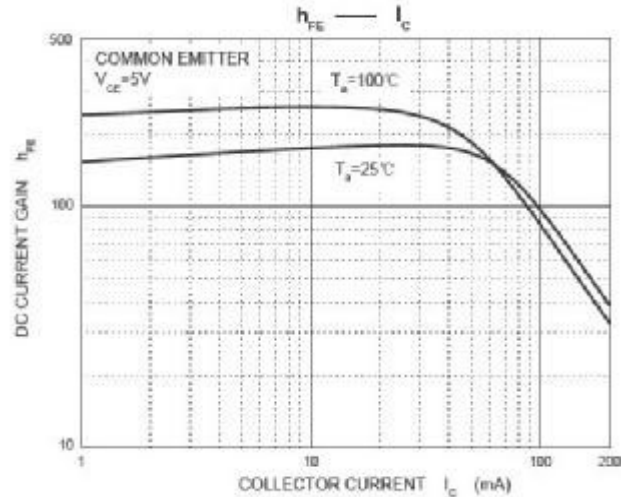
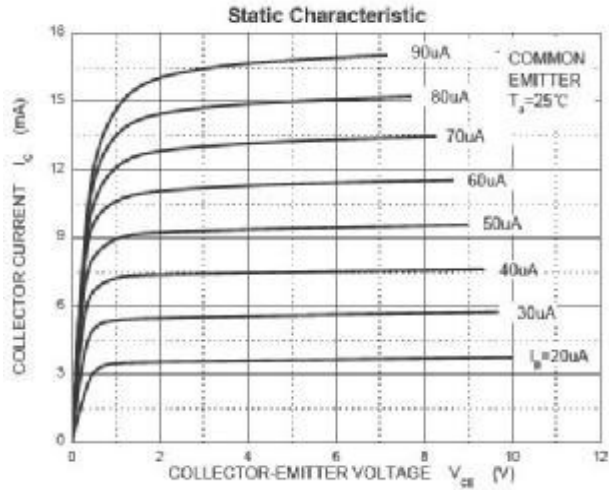


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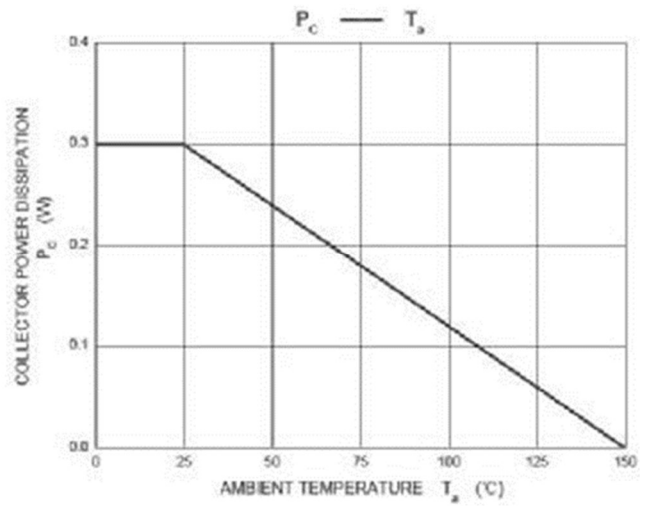
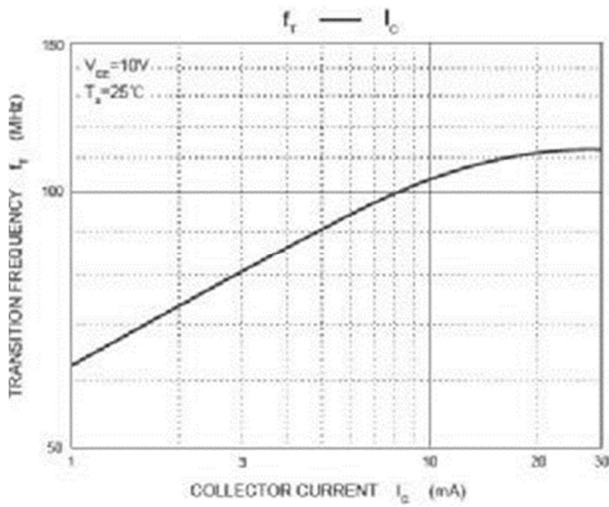
CLASSIFICATION OF hFE(1)

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

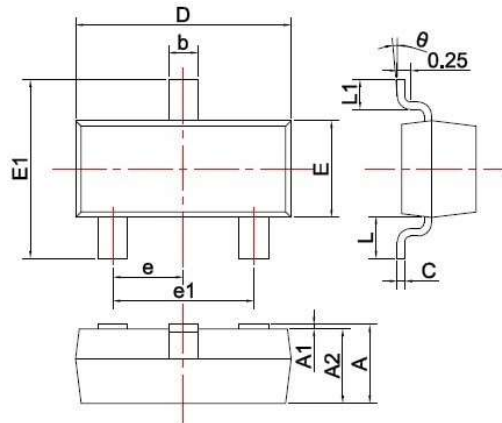
RATING AND CHARACTERISTIC CURVES



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SOT-23 PACKAGE OUTLINE Plastic surface mounted package

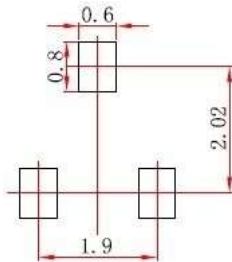


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



Note:

- Controlling dimension: In millimeters.
- General tolerance: ± 0.05 mm.
- The pad layout is for reference purposes only.

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