

SOT-523 Plastic-Encapsulate Transistors

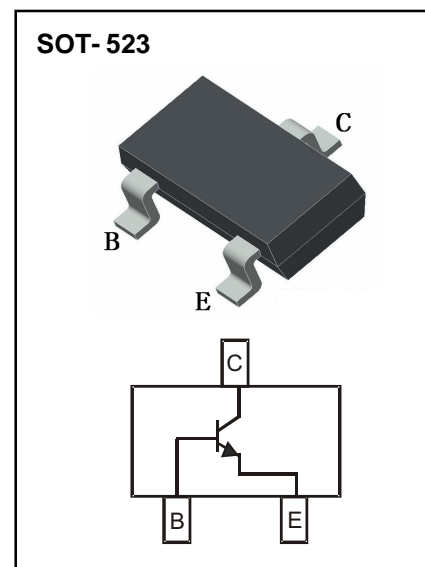
TRANSISTOR(NPN)

Features

- Collector Current: $I_C=0.1A$

Marking:

- J6



Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbols	Value	Units
Collector-Base Voltage	VCBO	50	V
Collector-Emitter Voltage	VCEO	45	V
Emitter -Base Voltage	VEBO	5	V
Collector Current-Continuous	IC	100	mA
Collector Power Dissipation	PC	200	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55-+150	°C
Thermal resistance From junction to ambient	R _{θ JA}	625	°C/W

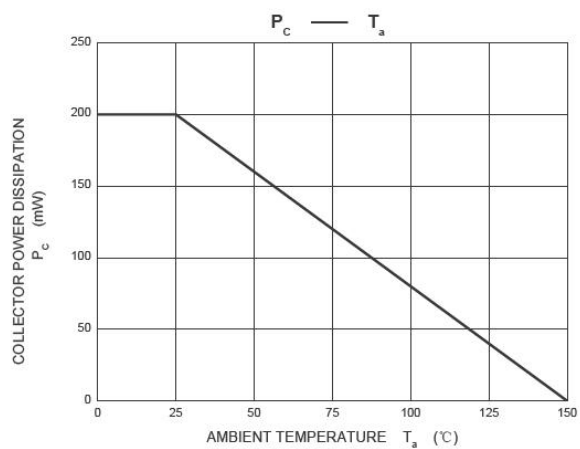
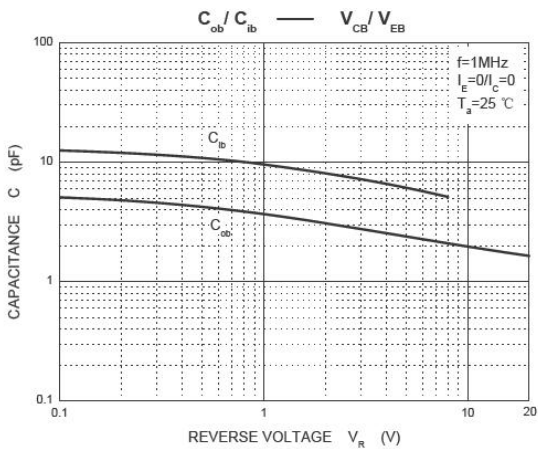
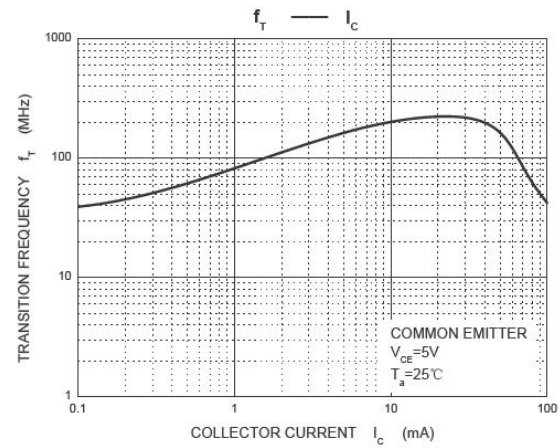
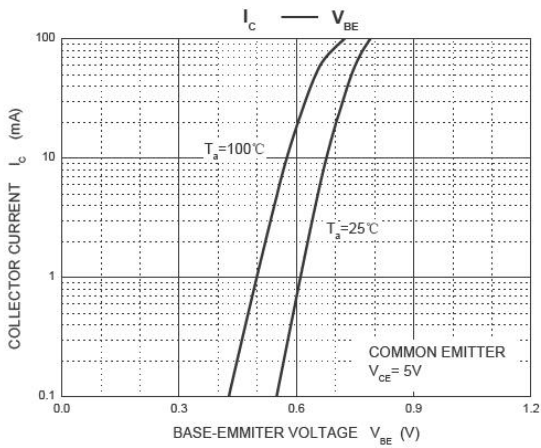
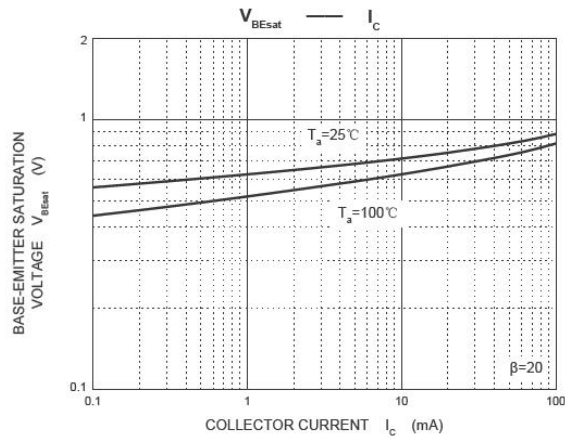
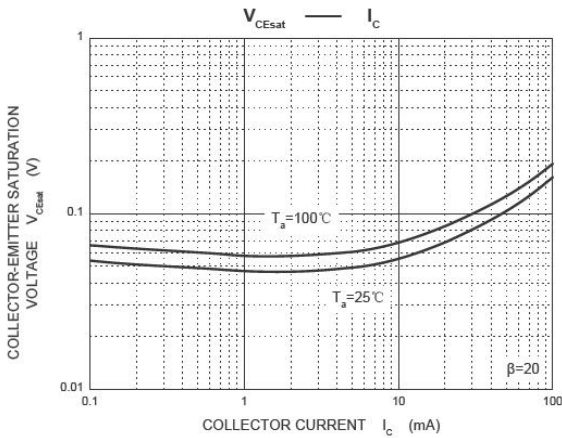
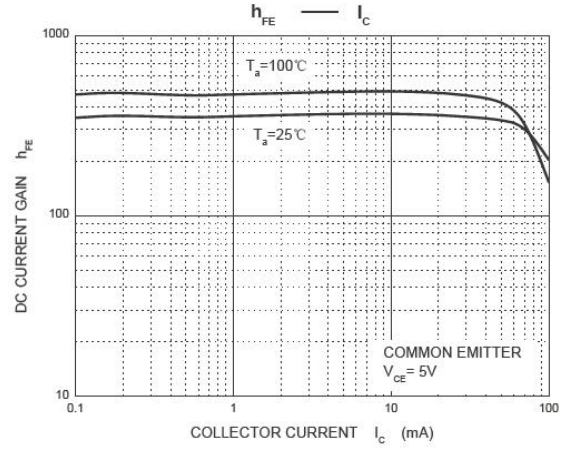
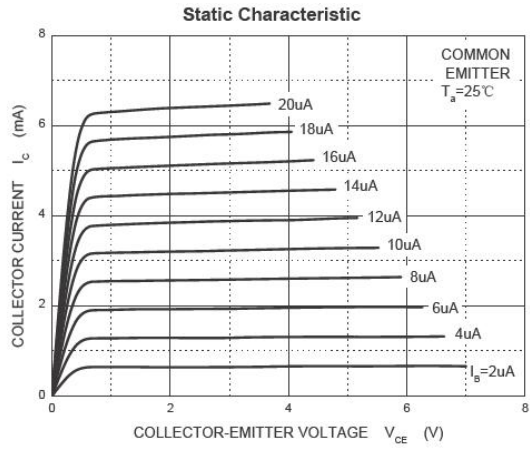
Electrical Characteristics(Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Max.	Unit
Collector-base breakdown voltage	V(BR)CBO	IC=100uA, IE=0	50		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=0.1mA, IB=0	45		V
Emitter-base breakdown voltage	V(BR)EBO	IE=100uA, IC=0	5		V
Collector cut-off current	ICEO	VCE=35V, IB=0		100	nA
Collector cut-off current	ICBO	VCB=50V, IE=0		100	nA
Emitter cut-off current	IEBO	VEB=3V, IC=0		100	nA
DC current gain	hFE	VCE=5V, IC=1mA	200	1000	
Collector-emitter saturation voltage	VCE(sat)	IC=100mA, IB=5mA		0.30	V
Base -emitter saturation voltage	VBE(sat)	IC=100mA, IB=5mA		1.00	V
Transition frequency	fT	VCE=5V, IC=10mA, f=30MHz	150		MHz

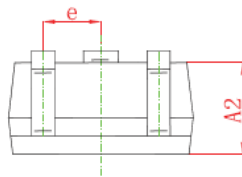
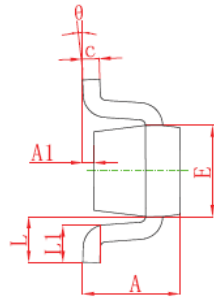
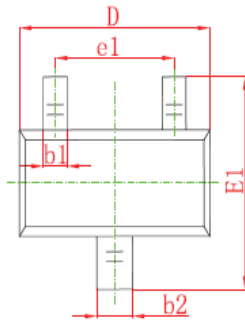
CLASSIFICATION OF hFE

RANK	L	H
RANGE	200-450	450-1000

Typical Characteristics

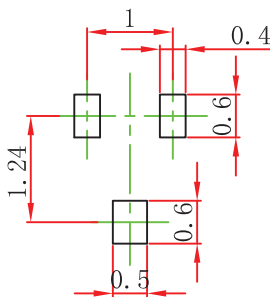


SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
C	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 TYP	
e1	0.900	1.100
L	0.400 REF	
L1	0.260	0.460
θ	0°	8°

SOT-523 Suggested Pad Layout



Note:

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

NOTICE

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