SOT-23 Plastic-Encapsulate Transistors

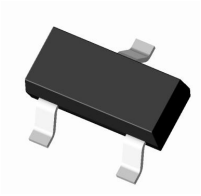
Features

- High DC current gain: hFE=200(Typ), VCE=6V,IC=1mA
- 200 mW Power Dissipation of 200mW
- High Stability and High Reliability

Mechanical Data

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

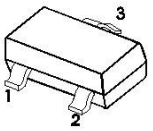
RoHS COMPLIANT



Marking: **SOT-23**

According to hFE

Pin definition



1. BASE
2. EMITTER
3. COLLECTOR

Maximum Ratings & Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter -Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Operating junction temperature range	T_J	150	°C
Storage temperature range	T_{STG}	-55-+150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	℃/W

Electrical Specifications (T_A=25℃ unless otherwise noted)

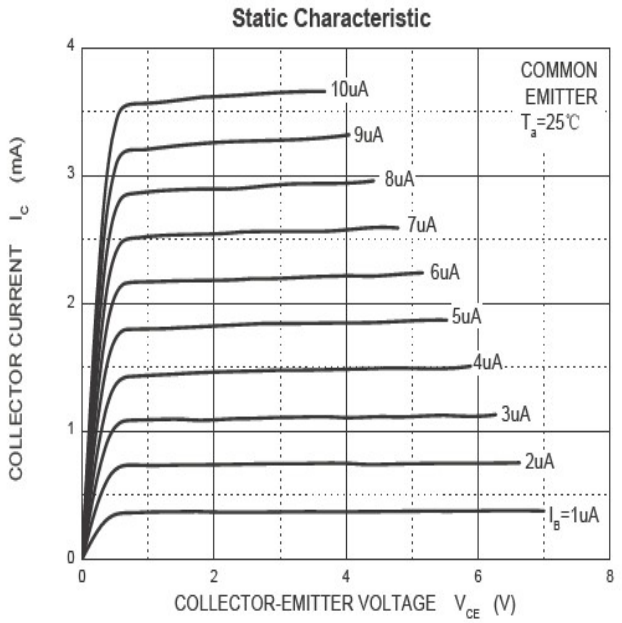
Parameter	Symbol	Test Conditions	Limits			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=100uA, IE=0	60			V
Collector-emitter breakdown voltage	V(BR)CEO	IC=1mA, IB=0	50			
Emitter-base breakdown voltage	V(BR)EBO	IE=100uA, IC=0	5			
Collector cut-off current	ICBO	VCB=60V, IE=0			100	nA
Emitter cut-off current	IEBO	VEB=5V, IC=0			100	nA
DC current gain	hFE(2)	VCE=6V, IC=1mA	90	200	600	
Collector-emitter saturation voltage	VCE(sat)	IC=100mA, IB=10mA			0.30	V
Base -emitter saturation voltage	VBE(sat)	IC=100mA, IB=10mA			1.00	
Transition frequency	fT	VCE=6V, IC=10mA,f=30MHz		250		MHz

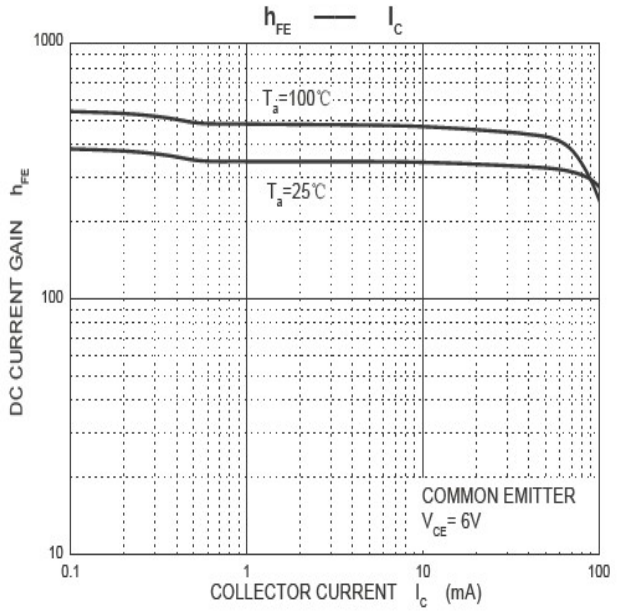
ClassIsIcatIon OF $h_{FE(1)}$

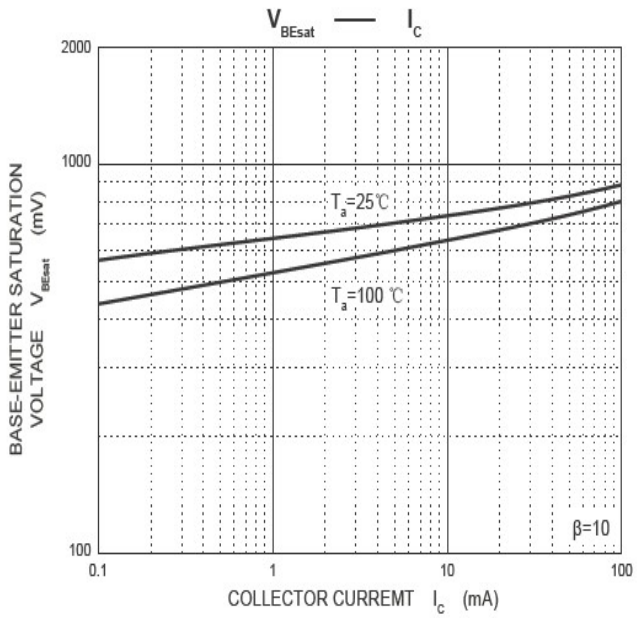
RANK	L4	L5	L6	L7
RANGE	90-180	135-270	200-400	300-600
Marking	L4	L5	L6	L7

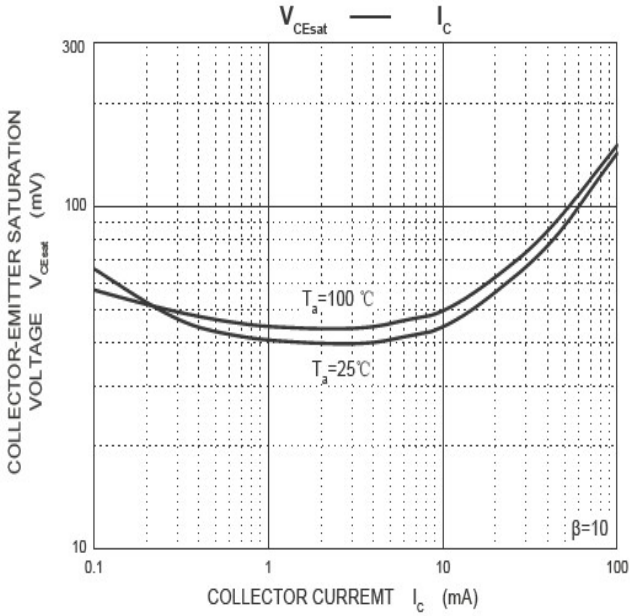
Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)



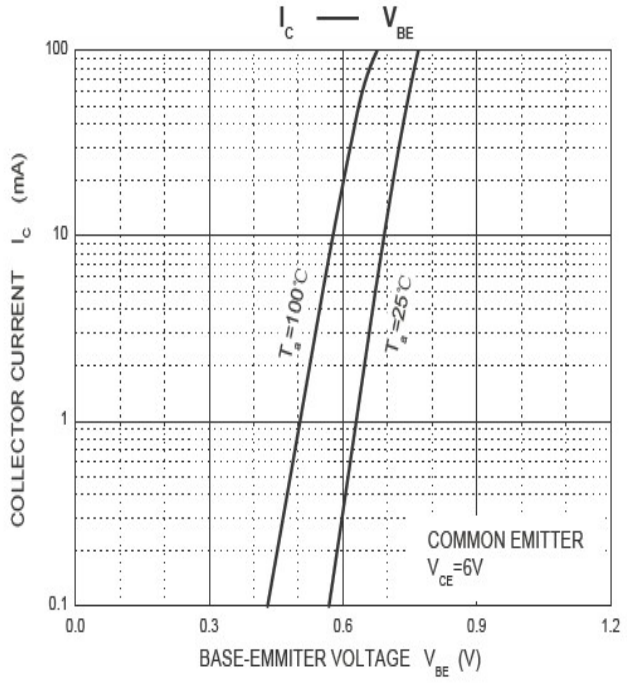


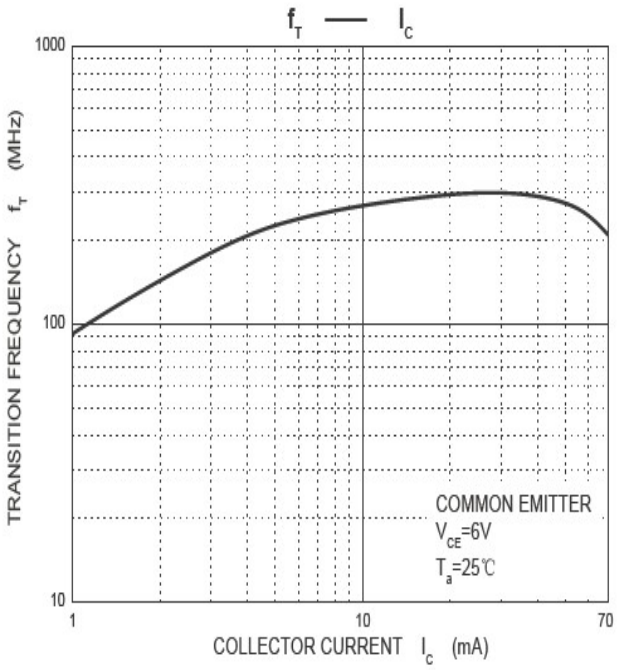


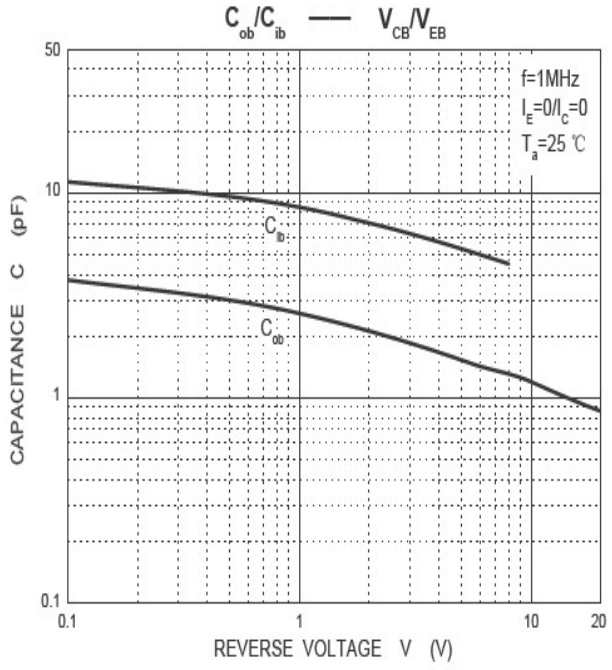


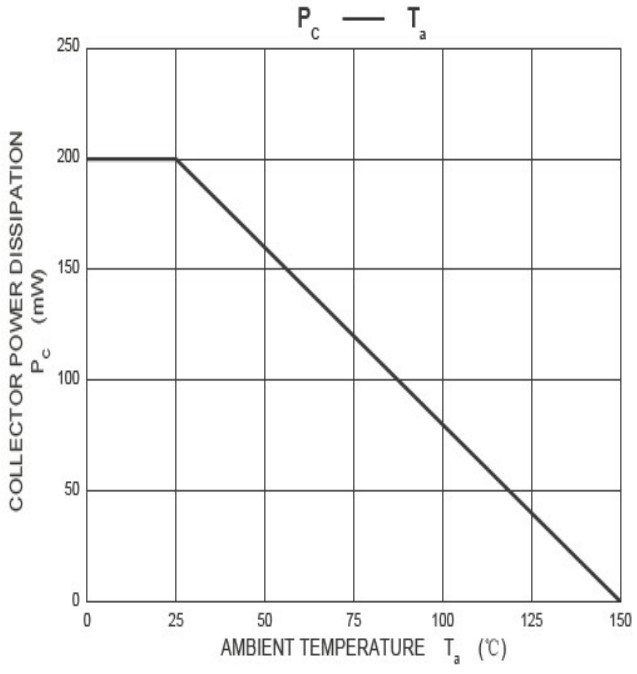
Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)



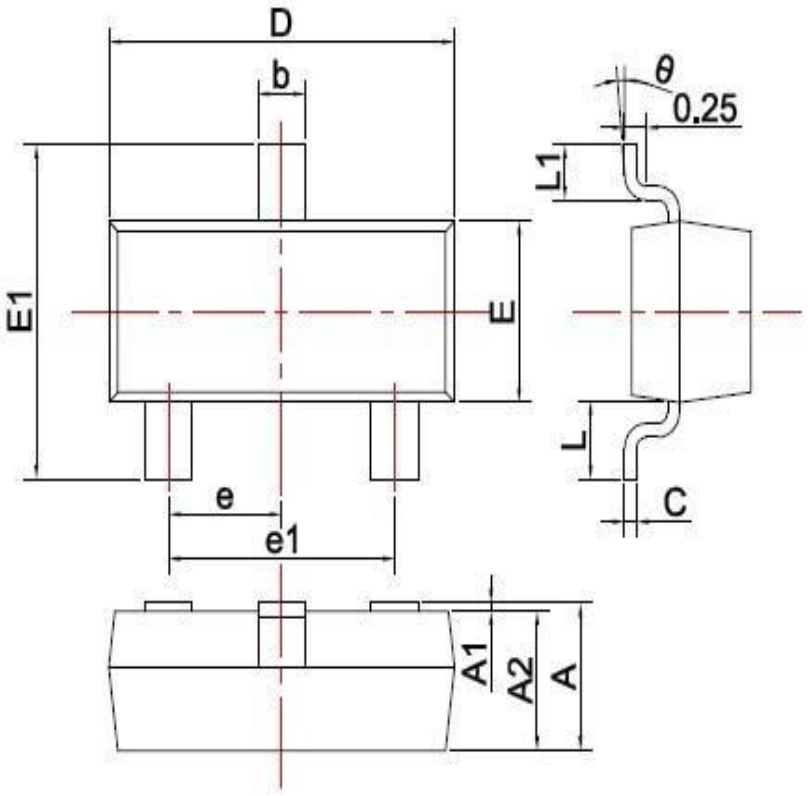






Package Outline Dimensions

millimeters



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°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2018.01.10	First issue

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