SOT-23 Plastic-Encapsulate Transistors

Features

- Complementary to MMBT5551.
- 300mW; Power Dissipation of 300mW
- High Stability and High Reliability

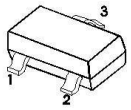
RoHS
COMPLIANT

Marking: 2L **SOT-23**

Mechanical Data

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

Pin definition



1. BASE
2. EMITTER
3. COLLECTOR

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	300	mW
Operating junction temperature range	TJ	150	°C
Storage temperature range	T_{STG}	-55 to +150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	416	℃/W

Electrical Specifications(TA=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=-100uA, IE=0	-160		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=-1mA, IB=0	-150		
Emitter-base breakdown voltage	V(BR)EBO	IE=-10uA, IC=0	-5		
Collector cut-off current	ICBO	VCB=-120V, IE=0		-100	nA
Emitter cut-off current	IEBO	VEB=-4V, IC=0		-100	nA
DC current gain	hFE(1)	VCE=-5V, IC=-1mA	80		
	hFE(2)	VCE=-5V, IC=-10mA	100	300	
	hFE(3)	VCE=-5V, IC=-50mA	30		
Collector-emitter saturation voltage	VCE(sat)1	IC=-10mA, IB=-1mA		-0.2	V
	VCE(sat)2	IC=-50mA, IB=-5mA		-0.5	
Base -emitter saturation voltage	VBE(sat)1	IC=-10mA, IB=-1mA		-1.00	
	VBE(sat)2	IC=-50mA, IB=-5mA		-1.00	
Transition frequency	fT	VCE=-5V, IC=10mA,f=30MHz	100		MHz

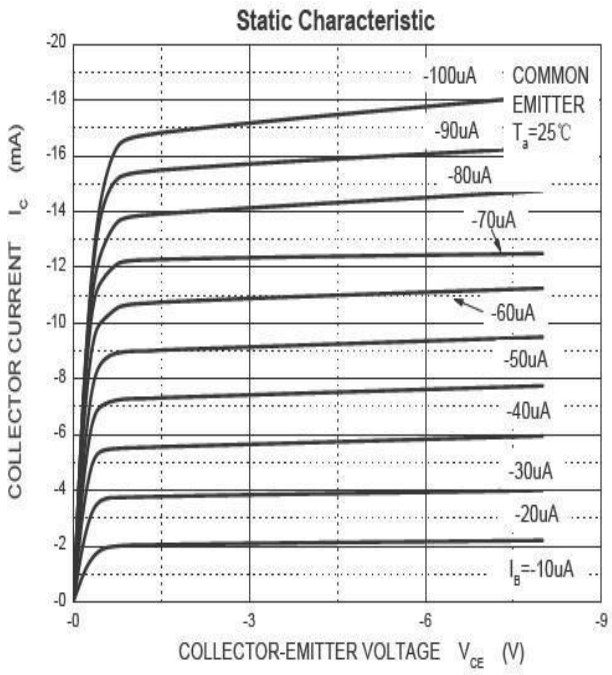
*Pulse test: pulse width≤ 300us, duty cycle ≤2.0%

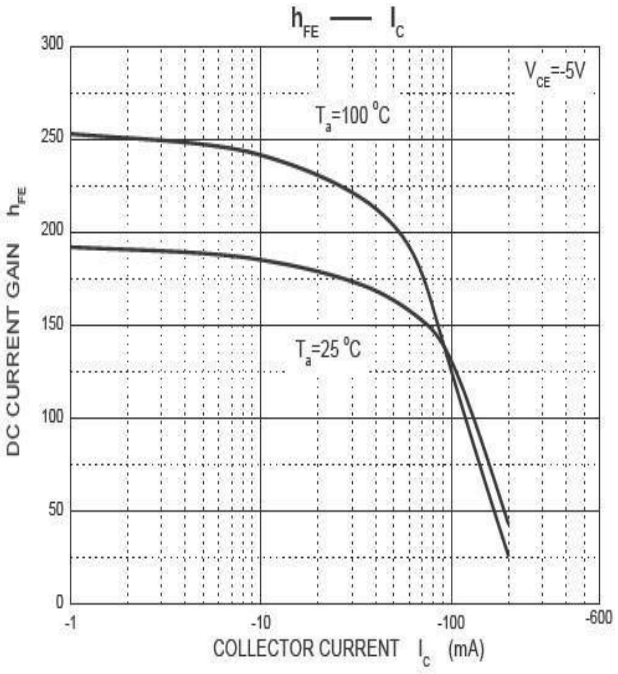
ClassIsIcatIon OF $h_{FE(2)}$

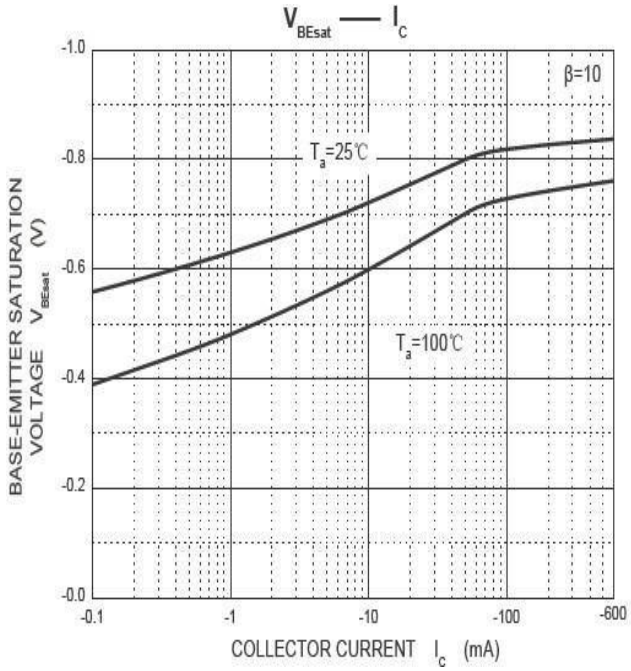
HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

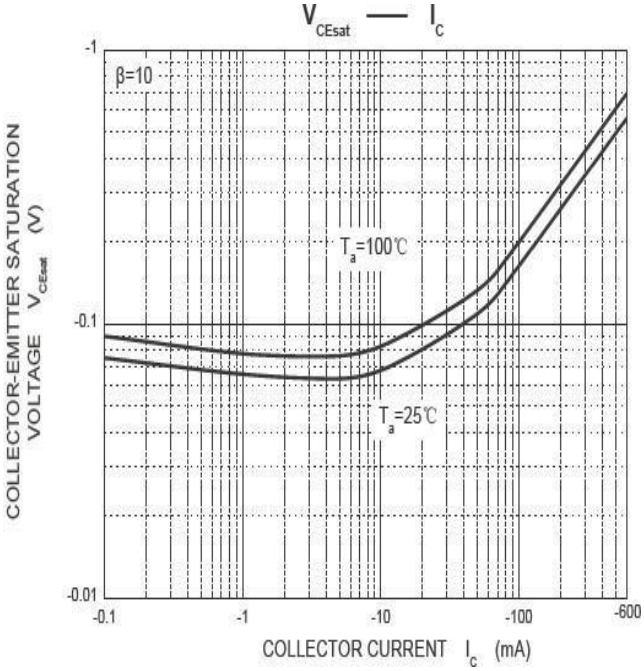
Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)









Ratings and Characteristics Curves

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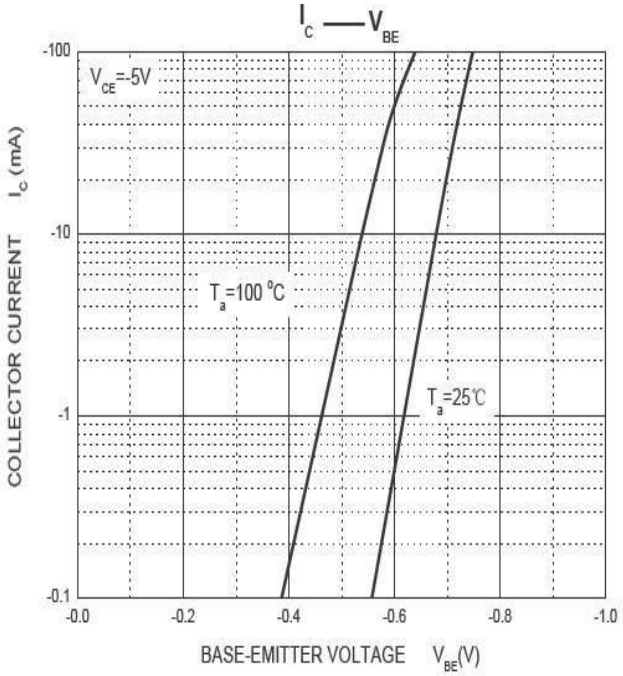
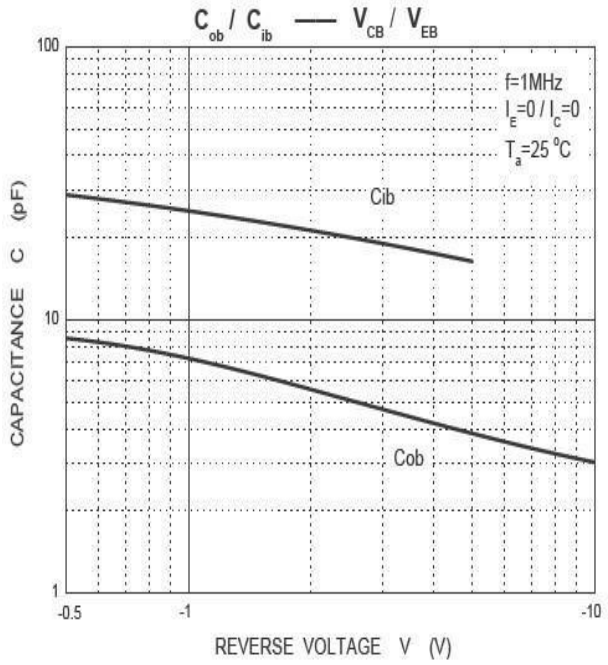
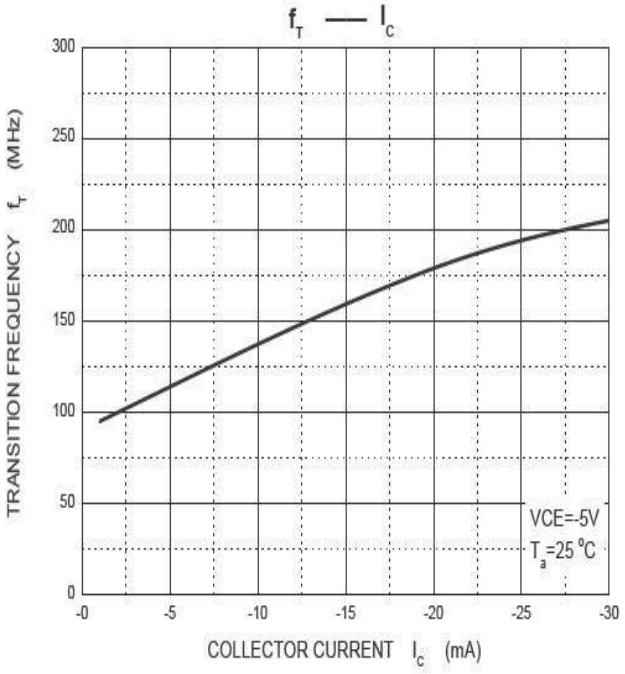
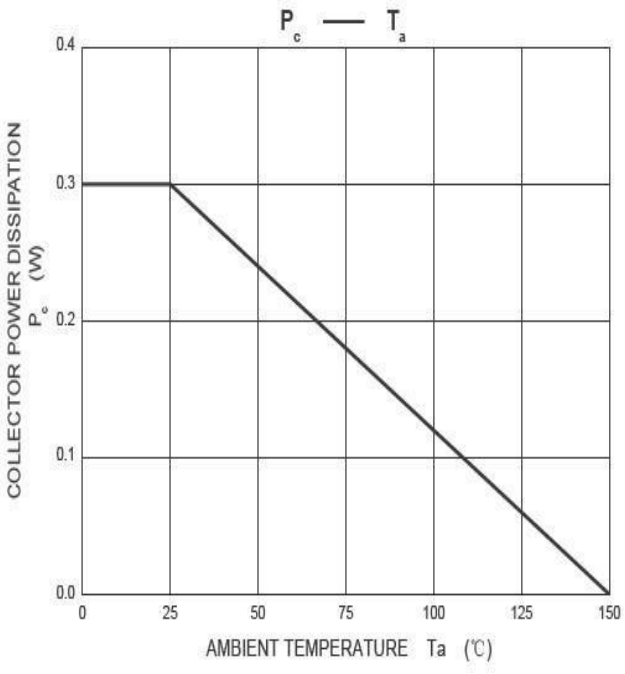


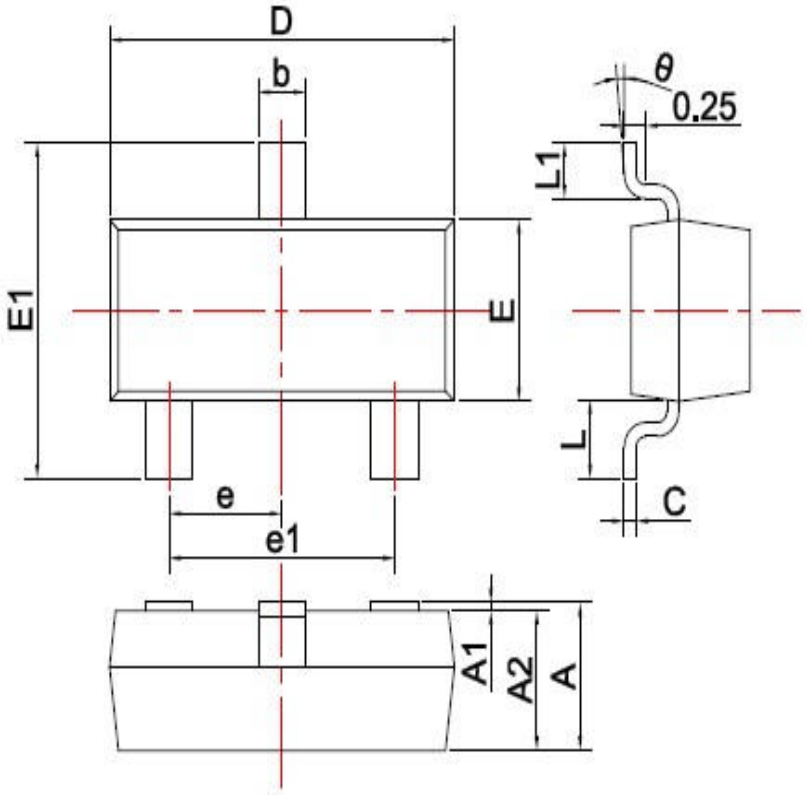






Package Outline Dimensions

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	2017.05.15	First issue

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