SOT-23 Plastic-Encapsulate Transistors

Features

- Complementary to SS8050.
- 300mW; Power Dissipation of 300mW
- High Stability and High Reliability

RoHS COMPLIANT

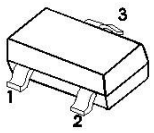
Mechanical Data

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

Marking: Y2

SOT-23

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}	-40	V
Collector-Emitter Voltage	V_{CEO}	-25	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-1500	mA
Collector Power Dissipation	P_C	300	mW
Operating junction temperature range	TJ	150	°C
Storage temperature range	T_{STG}	-55-+150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	℃/W

Electrical Specifications (T_A=25℃ unless otherwise noted)

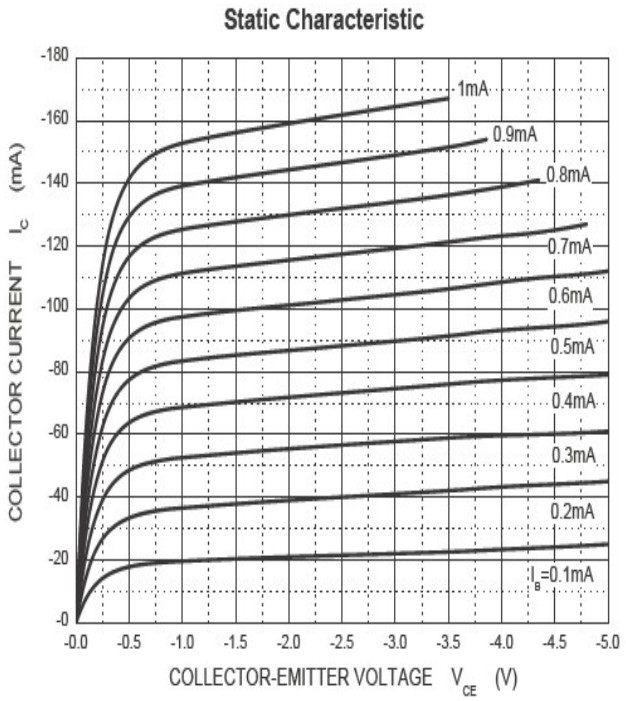
Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I_C=-100uA, I_E=0	-40		V
Collector-emitter breakdown voltage	V(BR)CEO	I_C=-0.1mA, I_B=0	-25		
Emitter-base breakdown voltage	V(BR)EBO	I_E=-100uA, I_C=0	-5		
Collector cut-off current	I_{CEO}	V_{CE}=-20V, I_B=0		-100	nA
Collector cut-off current	I_{CBO}	V_{CB}=-40V, I_E=0		-100	
Emitter cut-off current	I_{EBO}	V_{EB}=-3V, I_C=0		-100	
DC current gain	$h_{FE(1)}$	V_{CE}=-1V, I_C=-100mA	120	400	
	$h_{FE(2)}$	V_{CE}=-1V, I_C=-800mA	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-800mA, I_B=-80mA		-0.60	V
Collector-emitter saturation voltage	$V_{BE(sat)}$	I_C=-800mA, I_B=-80mA		-1.20	
Base-emitter voltage	V_{BE}	V_{CE}=-1V, I_C=-10mA		-1.00	
Transition frequency	fT	V_{CE}=-10V, I_C=-50mA,f=30MHz	100		MHz
Collector output capacitance	Cob	V_{CB}=-10V,I_E=0,f=1MHz		20	pF

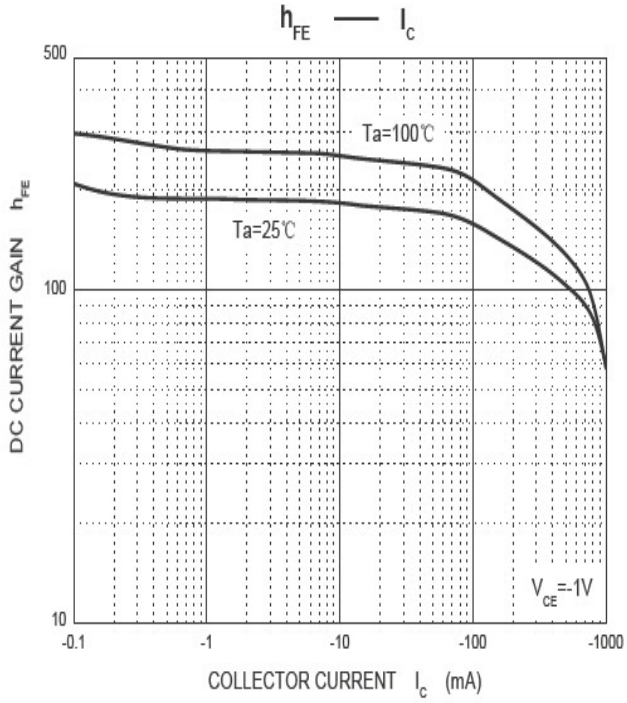
Classification OF $h_{FE(2)}$

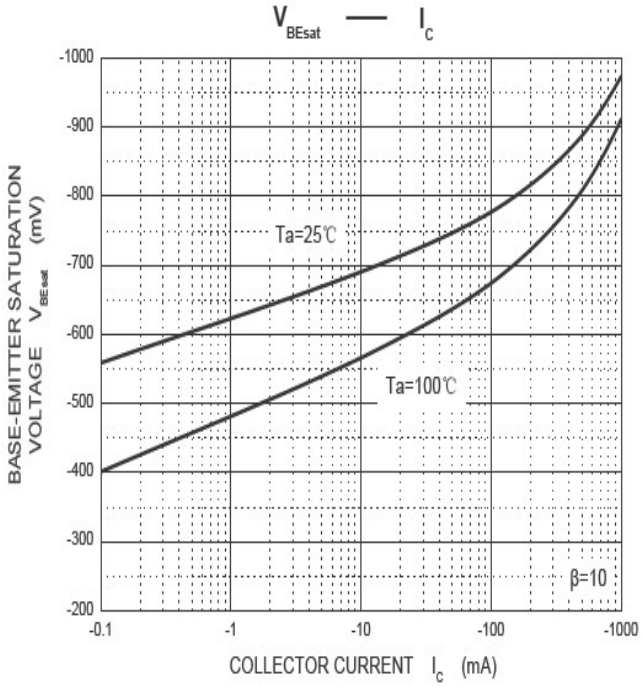
RANK	L	H	J
RANGE	120-200	200-350	300-400

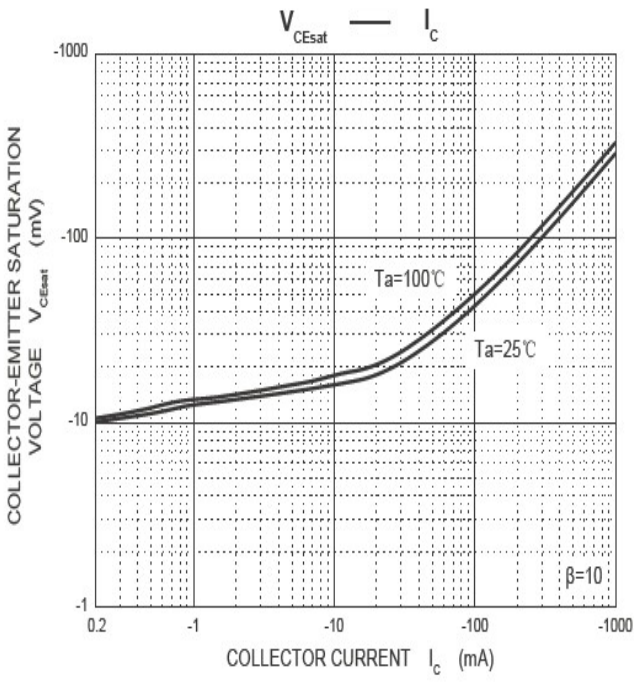
Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)









Ratings and Characteristics Curves

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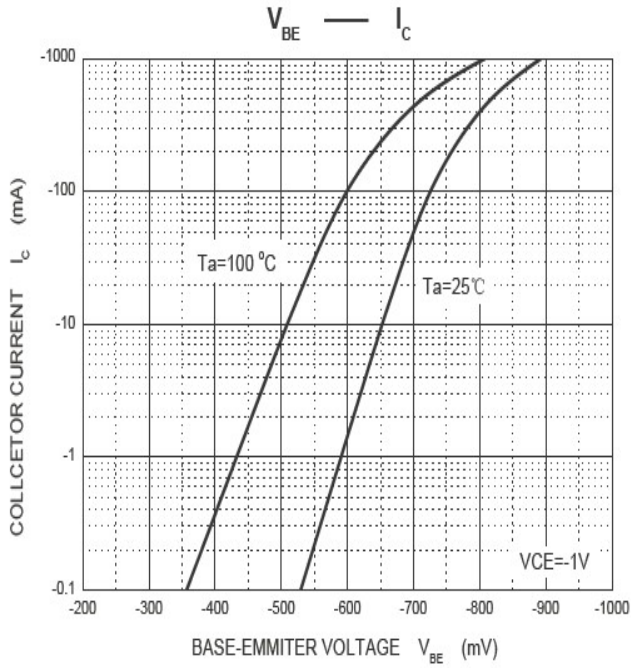
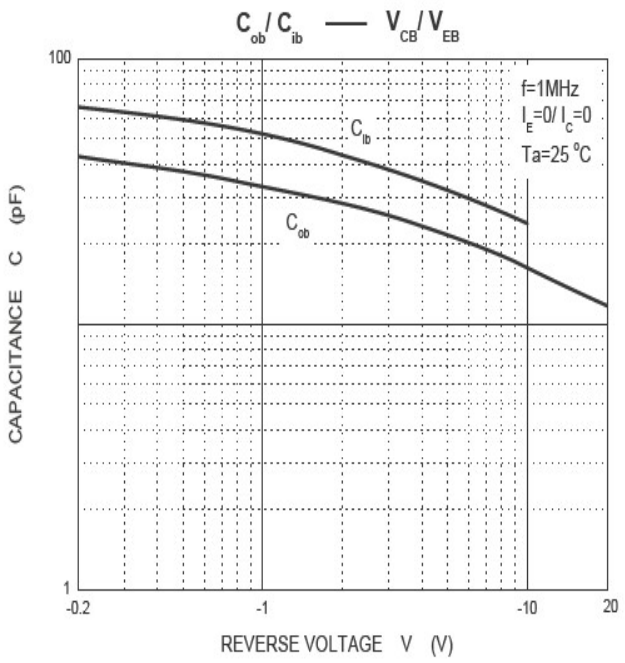
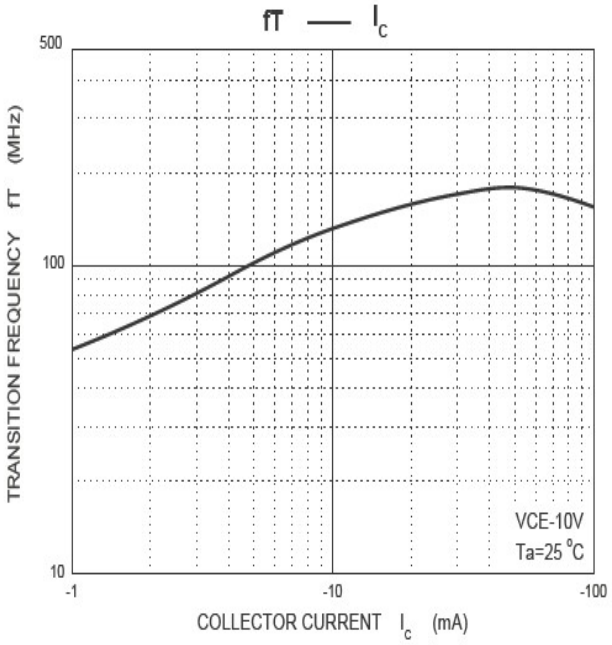
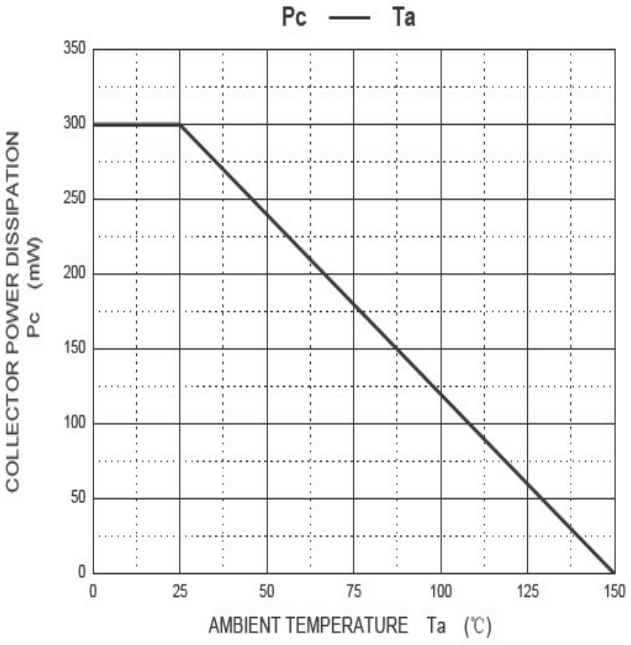


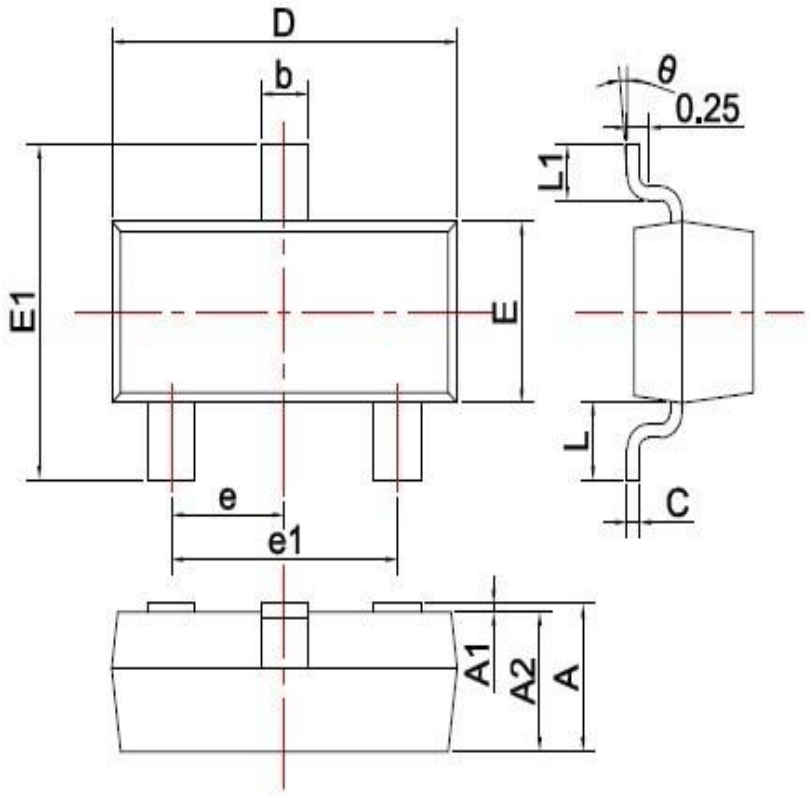






Package Outline Dimensions

in inches (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°

Unit: mm

Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.02.16	First issue

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