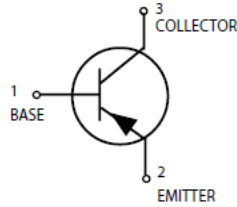
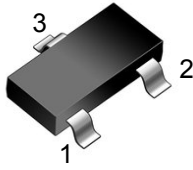


**SOT-23**



**MARKING: M6**

**Features**

- As complementary type the NPN transistor S9014 is recommended
- High stability and high reliability
- Epitaxial planar die construction
- Halogen free and RoHS compliant

**Mechanical Data**

SOT-23 Small Outline Plastic Package  
EpoxyUL: 94V-0

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel,7" reel	3000	EIA-481-1

**Maximum Ratings & Thermal Characteristics**

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

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CBO</sub>	-50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-45	V
Emitter -Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current-Continuous	I <sub>c</sub>	-100	mA
Collector Power Dissipation	P <sub>c</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	625	°C/W

**Electrical Characteristics**

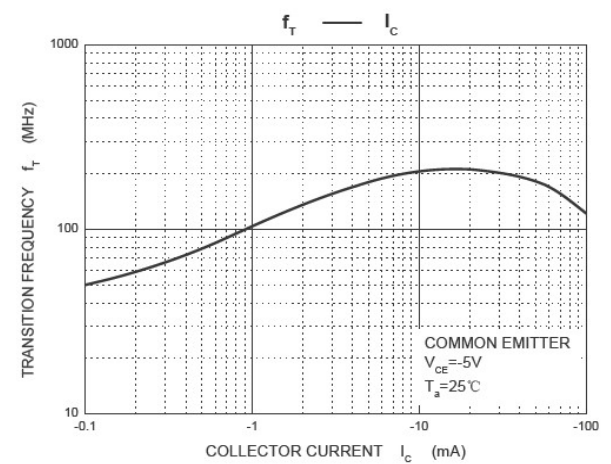
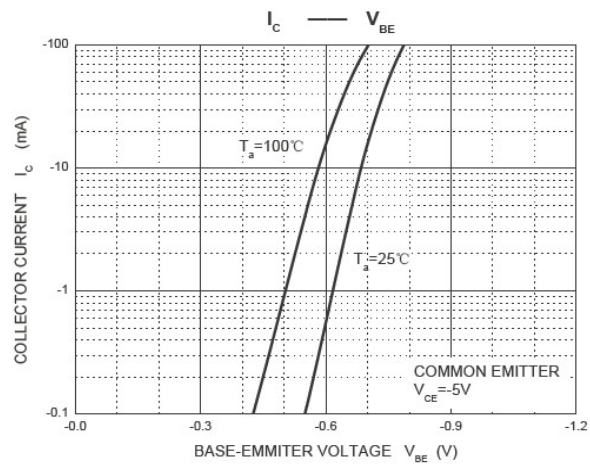
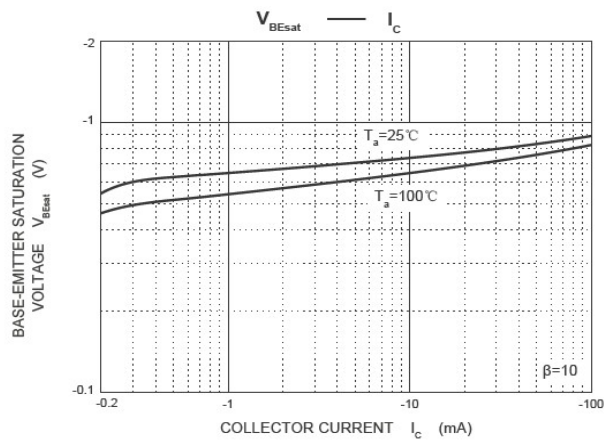
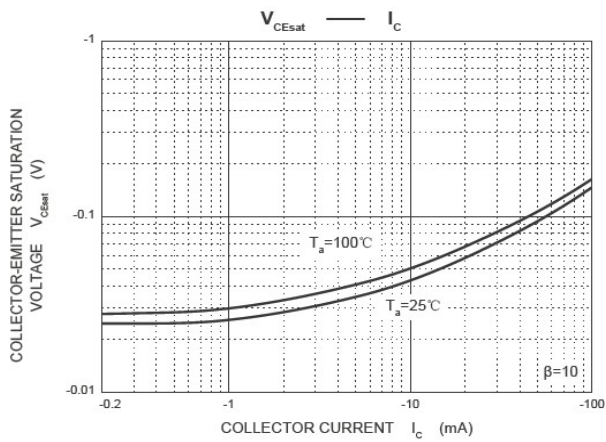
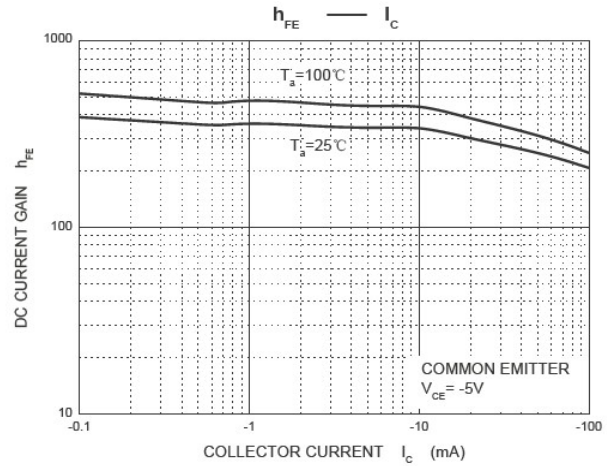
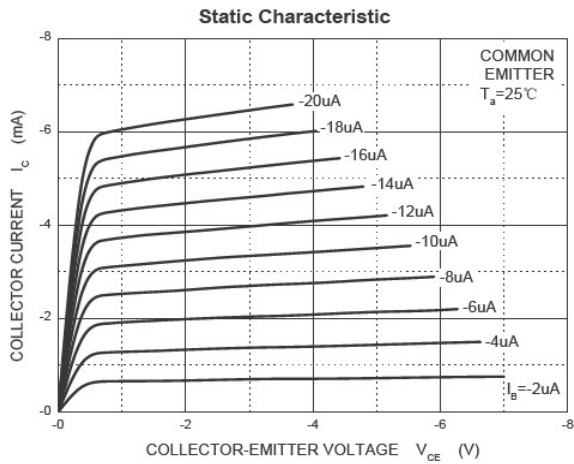
(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I <sub>C</sub> =-100uA, I <sub>E</sub> =0	-50		V
Collector-emitter breakdown voltage	V(BR)CEO	I <sub>C</sub> =-0.1mA, I <sub>B</sub> =0	-45		V
Emitter-base breakdown voltage	V(BR)EBO	I <sub>E</sub> =-100uA, I <sub>C</sub> =0	-5		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-50V, I <sub>E</sub> =0		-100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0		-100	nA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1mA	200	1000	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA		-0.30	V
Base -emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA		-1.00	V
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA, f=30MHz	150		MHz

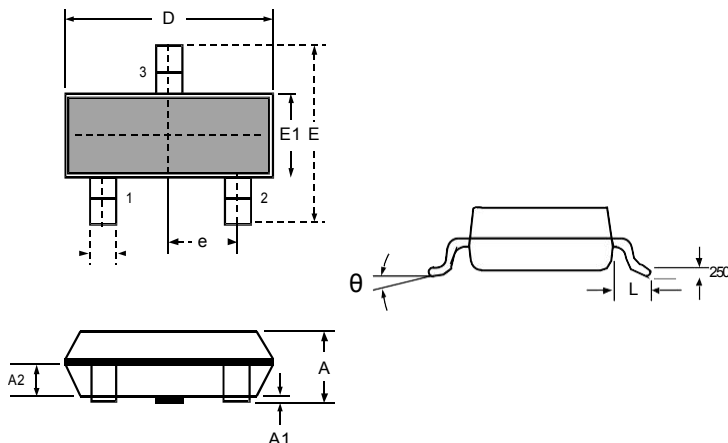
**CLASSIFICATION OF h<sub>FE</sub>(1)**

RANK	L	H
RANGE	200-450	450-1000

## Ratings and Characteristic Curves



## Package Outline Dimensions: SOT-23



### DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
$\theta$	0	8°	0	8°