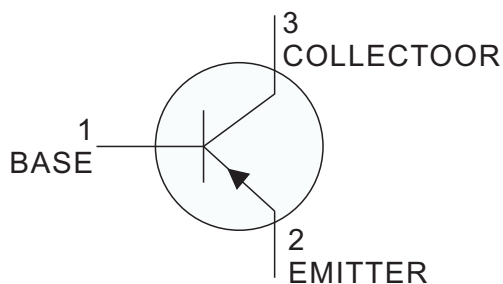
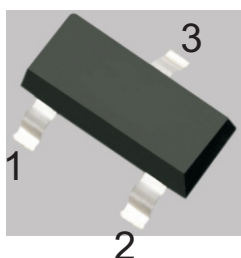




General Purpose Transistor

PNP Silicon

SOT-23



DEVICE MARKING  
S9015 = M6

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	$V_{CEO}$	-45	Vdc
Collector–Base Voltage	$V_{CBO}$	-50	Vdc
Emitter–Base Voltage	$V_{EBO}$	-5.0	Vdc
Collector Current — Continuous	$I_C$	-100	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) $T_A = 25^\circ\text{C}$	$P_D$	200	mW
Junction and Storage Temperature	$T_J, T_{stg}$	- 55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise noted.)  
OFF CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Breakdown Voltage(3) ( $I_C = -0.1 \text{ mAdc}, I_B = 0$ )	$V_{(BR)CEO}$	-45	–	Vdc
Collector–Base Breakdown Voltage ( $I_C = -100 \mu\text{Adc}, I_E = 0$ )	$V_{(BR)CBO}$	-50	–	Vdc
Emitter–Base Breakdown Voltage ( $I_E = -100 \mu\text{Adc}, I_C = 0$ )	$V_{(BR)EBO}$	-5.0	–	Vdc
Collector cut-off current ( $V_{CB} = -50 \text{ Vdc}, I_E = 0$ )	$I_{CBO}$	–	-0.1	$\mu\text{Adc}$
Emitter cut-off current ( $V_{EB} = -5 \text{ Vdc}, I_C = 0$ )	$I_{EBO}$	–	-0.1	$\mu\text{Adc}$

1. FR–5 = 1.0 x 0.75 x 0.062 in.
2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.
3. Pulse Test: Pulse Width <300  $\mu\text{s}$ , Duty Cycle <2.0%.



**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted) (Continued)  
ON CHARACTERISTICS (3)**

Characteristic	Symbol	Min	Max	Unit
DC Current Gain	h <sub>FE</sub>			—
(I <sub>C</sub> = -1.0 mA <sub>dc</sub> , V <sub>CE</sub> = -5 V <sub>dc</sub> )		200	1000	
Collector–Emitter Saturation Voltage	V <sub>CE(sat)</sub>			V <sub>dc</sub>
(I <sub>C</sub> = -100 mA <sub>dc</sub> , I <sub>B</sub> = -10 mA <sub>dc</sub> )(3)		—	-0.3	
Base–Emitter Saturation Voltage(3)	V <sub>BE(sat)</sub>			V <sub>dc</sub>
(I <sub>C</sub> = -100 mA <sub>dc</sub> , I <sub>B</sub> = -10mA <sub>dc</sub> )		—	-1.0	

**SMALL–SIGNAL CHARACTERISTICS**

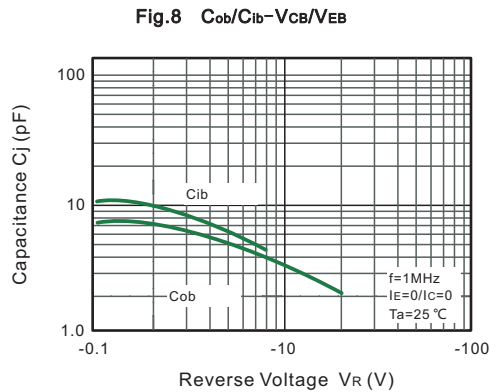
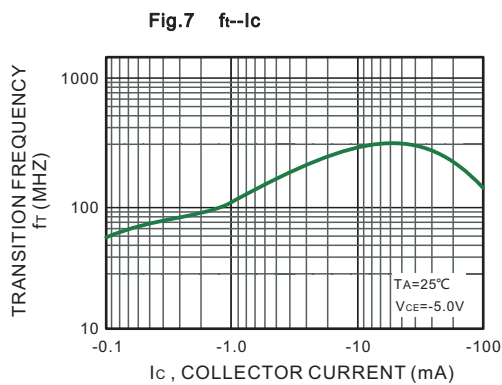
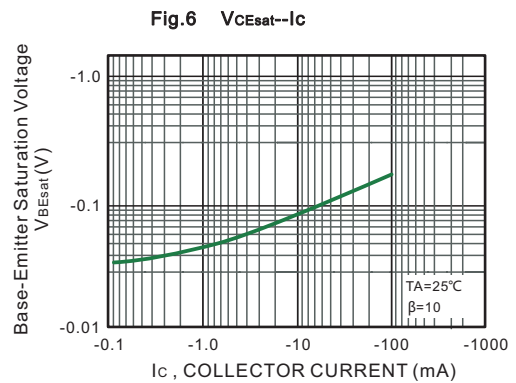
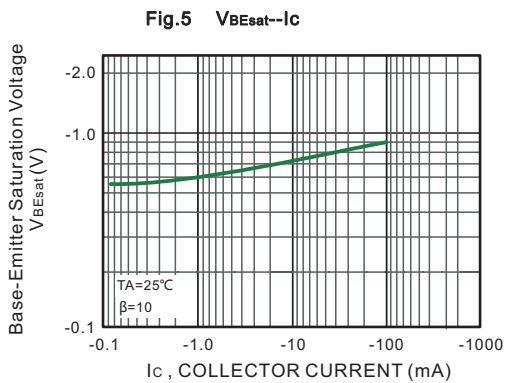
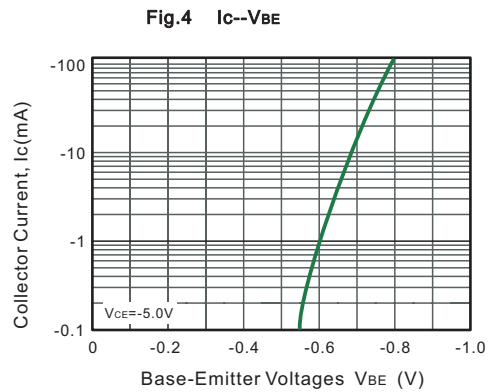
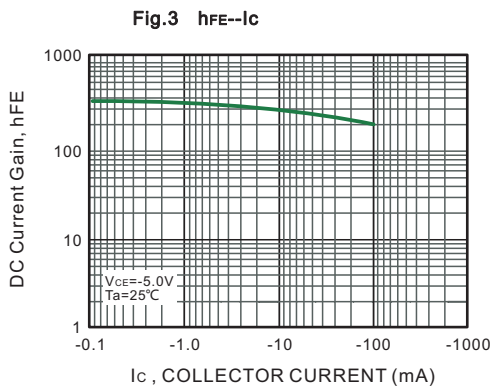
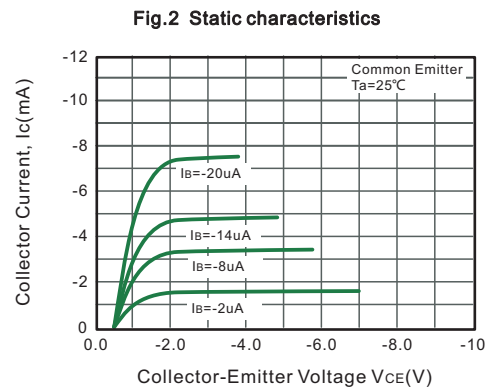
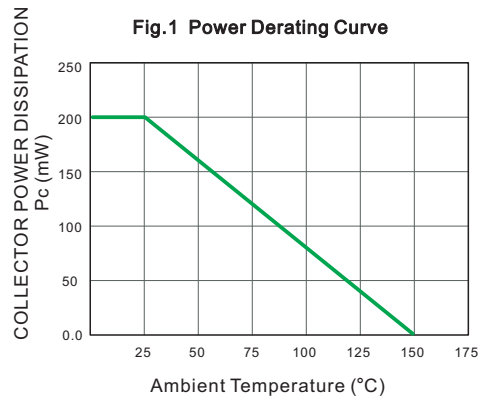
Current–Gain — Bandwidth Product (I <sub>C</sub> = -10mA <sub>dc</sub> , V <sub>CE</sub> = -5.0V <sub>dc</sub> , f = 30MHz)	f <sub>t</sub>	150	—	MHz
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**CLASSIFICATION OF h<sub>FE</sub>**

Rank	L	H
Range	200-450	400-1000

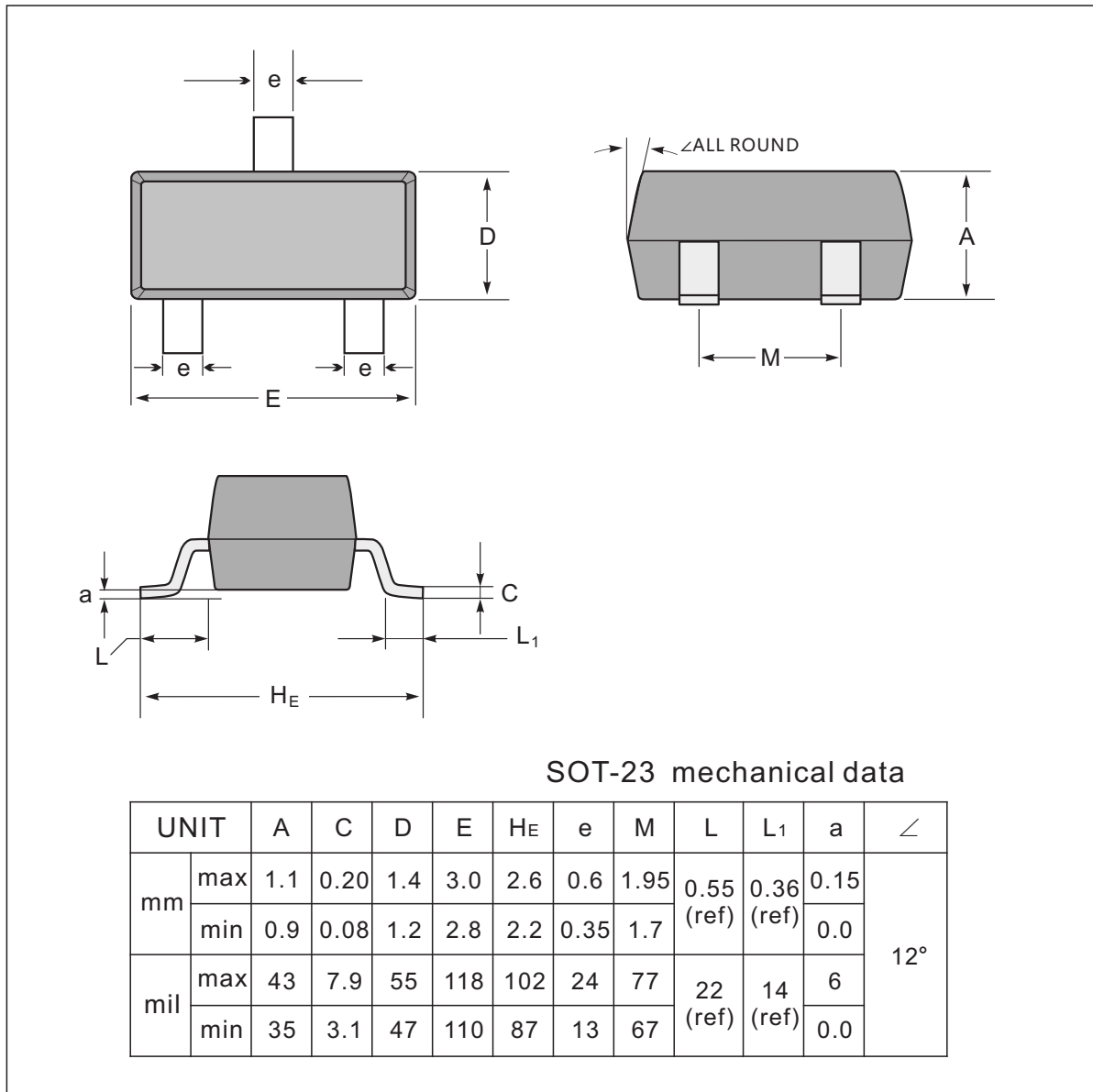


### TYPICAL CHARACTERISTICS

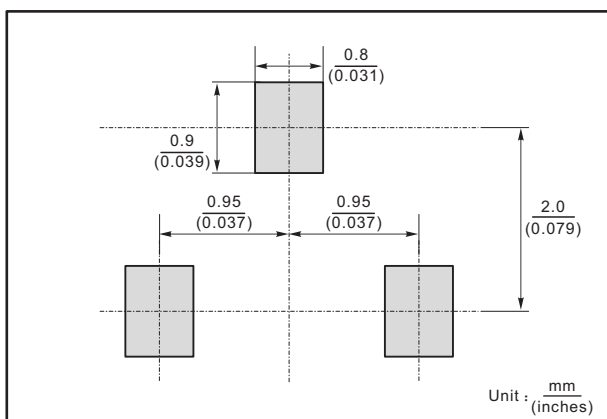




### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size



#### Marking

Type number	Marking code
S9015	M6

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