

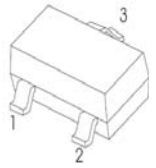
## TRANSISTOR (PNP)

## FEATURES

- Complementary to S9014
- Power Dissipation of 200mW
- High Stability and High Reliability
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

Marking: M6

## SOT - 23



1. BASE

2. EMITTER

3. COLLECTOR

**Maximum Ratings & Thermal Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-45	V
Emitter -Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	$I_C$	-100	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	°C/W

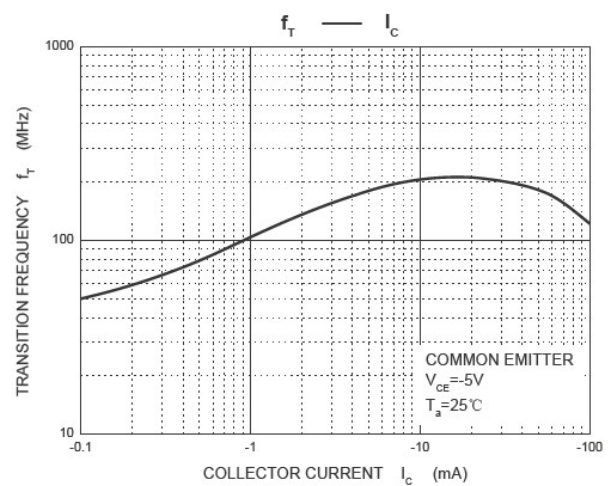
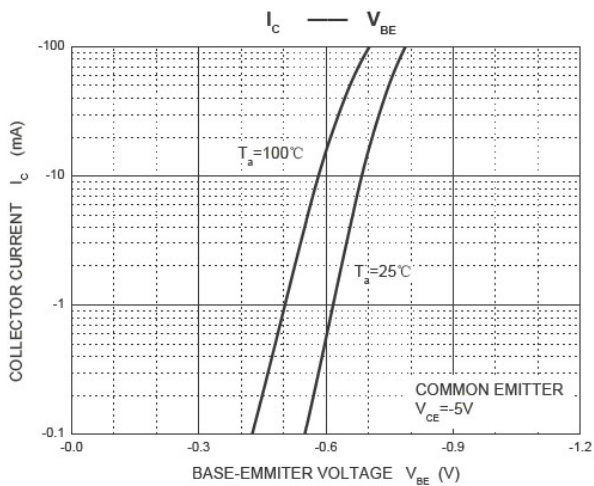
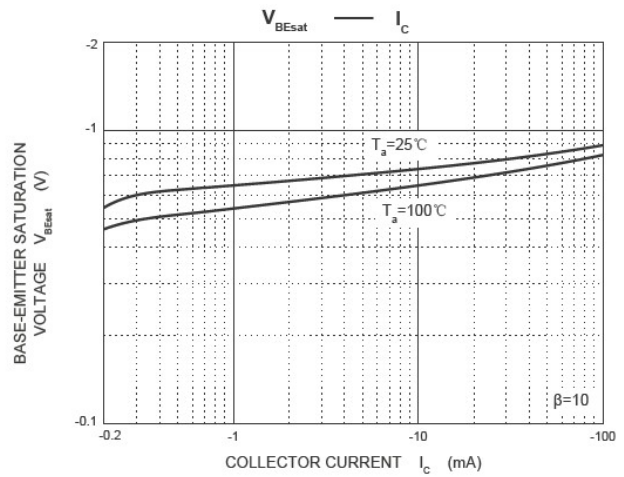
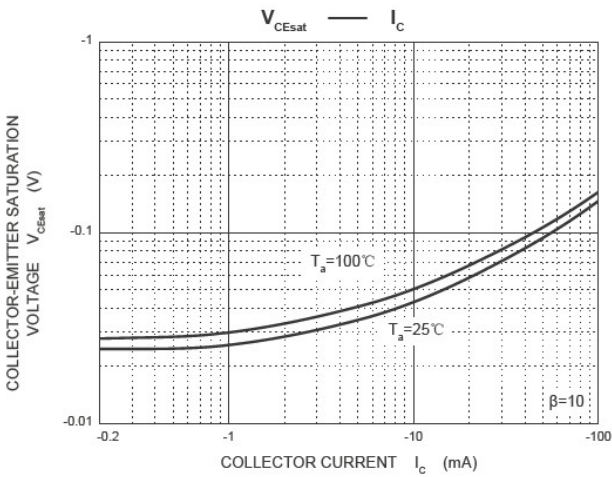
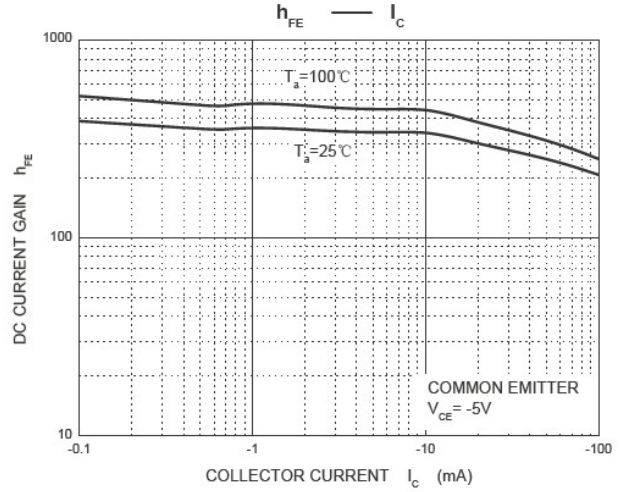
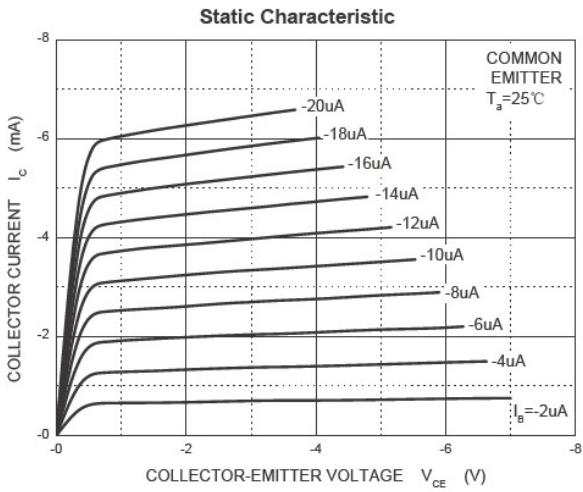
**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

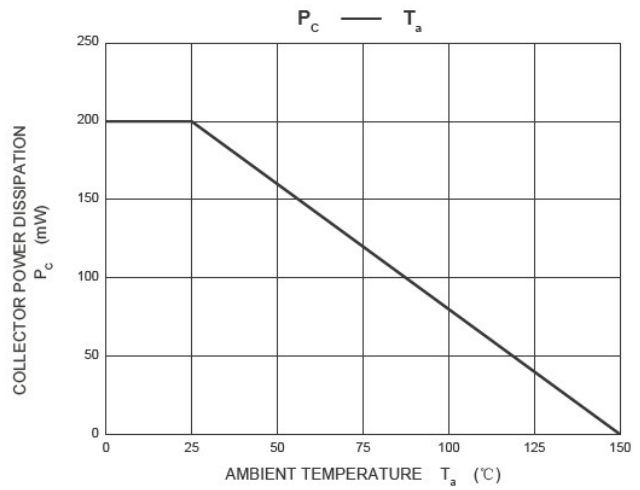
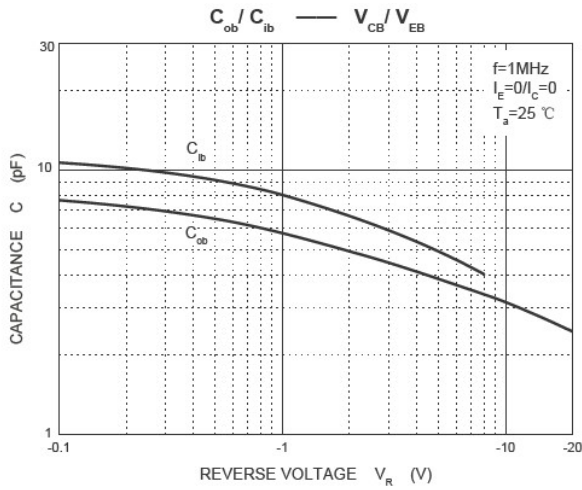
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -0.1mA, I_B = 0$	-45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$		-100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$		-100	nA
DC current gain	$h_{FE}$	$V_{CE} = -5V, I_C = -1mA$	200	1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$		-0.30	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -10mA$		-1.00	V
Transition frequency	$f_T$	$V_{CE} = -5V, I_C = -10mA, f = 30MHz$	150		MHz

**CLASSIFICATION OF  $h_{FE(1)}$**

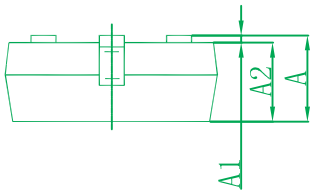
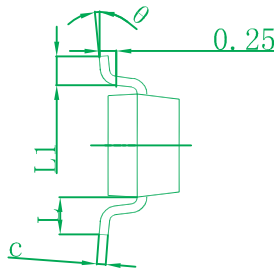
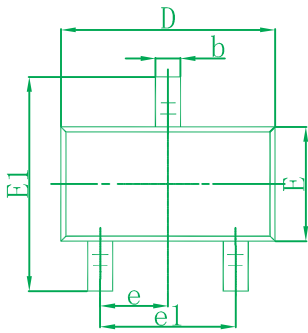
RANK	L	H
RANGE	200-450	450-1000

Typical characteristics



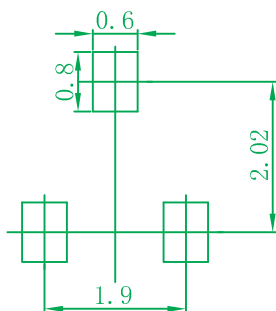


**SOT-23 Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In 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
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**SOT-23 Suggested Pad Layout**



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance: ± 0.05mm.
  3. The pad layout is for reference purposes only.