

Features

- Complementary to S9014
- Power dissipation of 200mW
- High stability and high reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

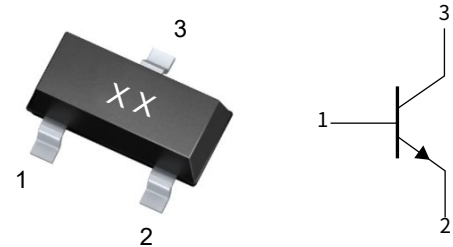


Function Diagram

Collector-Base Voltage
VCBO 50V
Collector Current
0.1 Ampere

Mechanical Data

- Case: SOT-23
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
S9014	SOT-23	S9014	3000

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V _{CB0}	V	50
Collector-Emitter Voltage	V _{CE0}		45
Emitter-Base Voltage	V _{EB0}		5.0
Collector Current	I _C	A	0.1
Collector Power Dissipation	P _C	mW	200
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150
Typical Thermal Resistance	R _{θJA}	°C /W	417

Electrical Characteristics (T_a=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Max
Collector-Base Breakdown Voltage	V _{(BR)CBO}	V	I _C =100μA, I _E =0	50	—
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}		I _C =1.0mA, I _B =0	45	—
Emitter-Base Breakdown Voltage	V _{(BR)EBO}		I _E =100μA, I _C =0	5.0	—
Collector-Base cut-off current	I _{CBO}	nA	V _{CB} = 50V, I _B =0	—	100
Emitter-Base cut-off current	I _{EBO}		V _{EB} = 5.0V, I _C =0	—	100
DC Current Gain	h _{FE}	—	I _C = 1.0mA V _{CE} = 5.0V	200	1000
Collector-Emitter Saturation Voltage	V _{CE(sat)}	V	I _C = 100mA I _B = 10mA	—	0.3
Base-Emitter Saturation Voltage	V _{BE(sat)}	V	I _C = 100mA I _B = 10mA	—	1.0

Classification Of h_{FE}

RANK	L	H
Range	200-450	450-1000

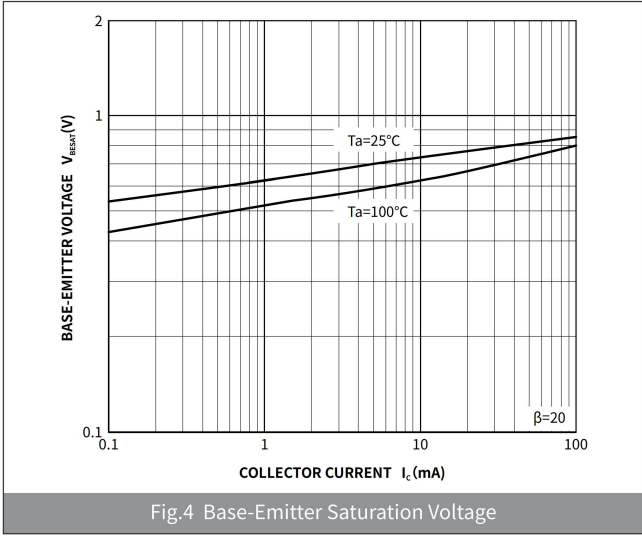
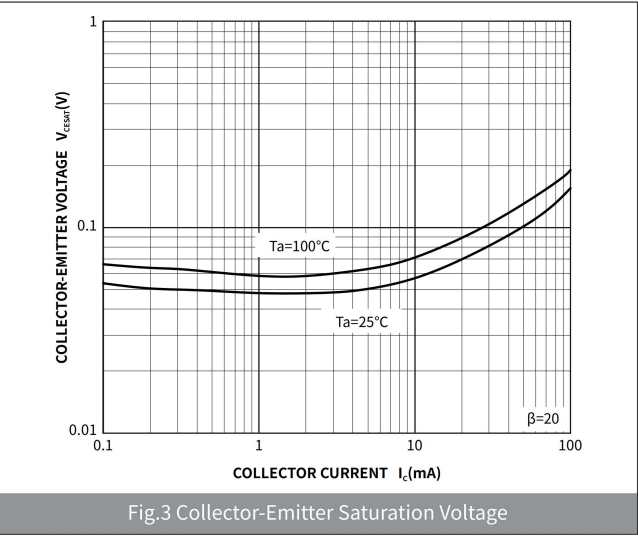
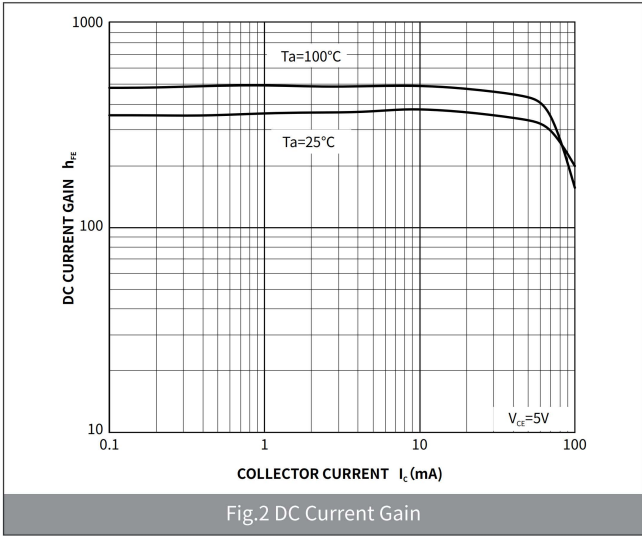
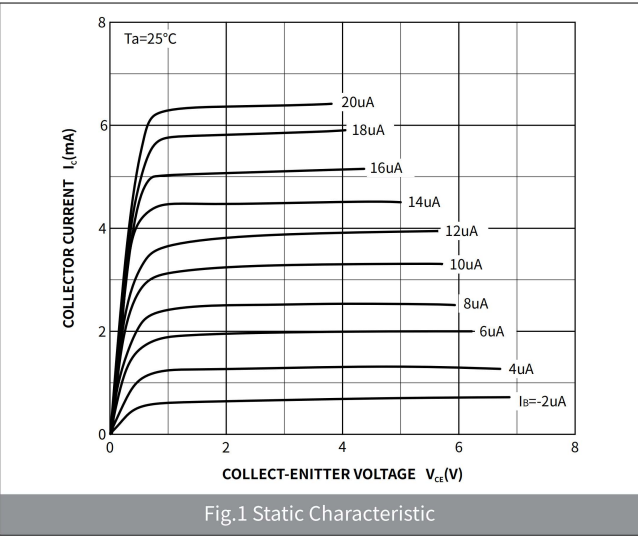
Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Max
Transition frequency	f_T	$I_C = 10\text{mA}$, $V_{CE} = 5.0\text{V}$, $f = 30\text{MHz}$	MHz	150	—

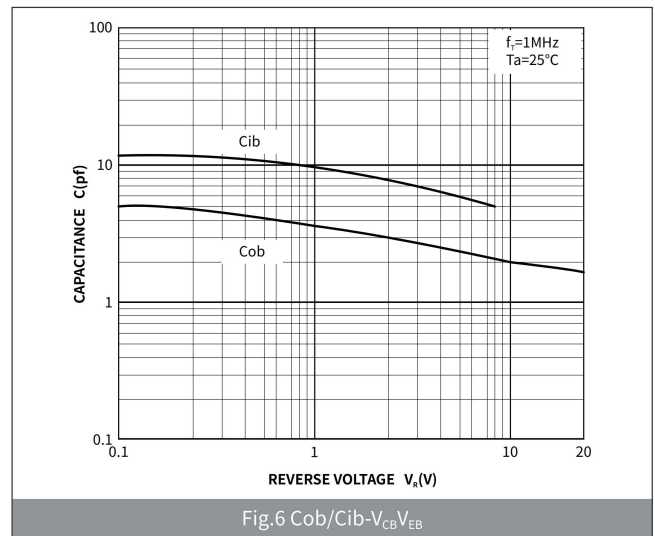
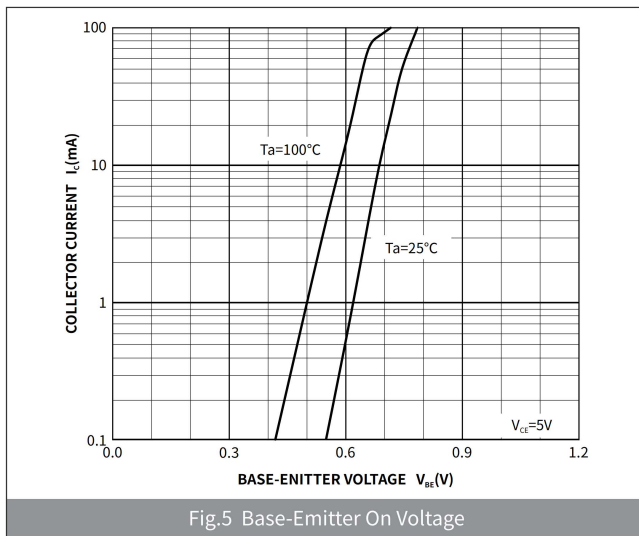
Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	45000	180000	7"

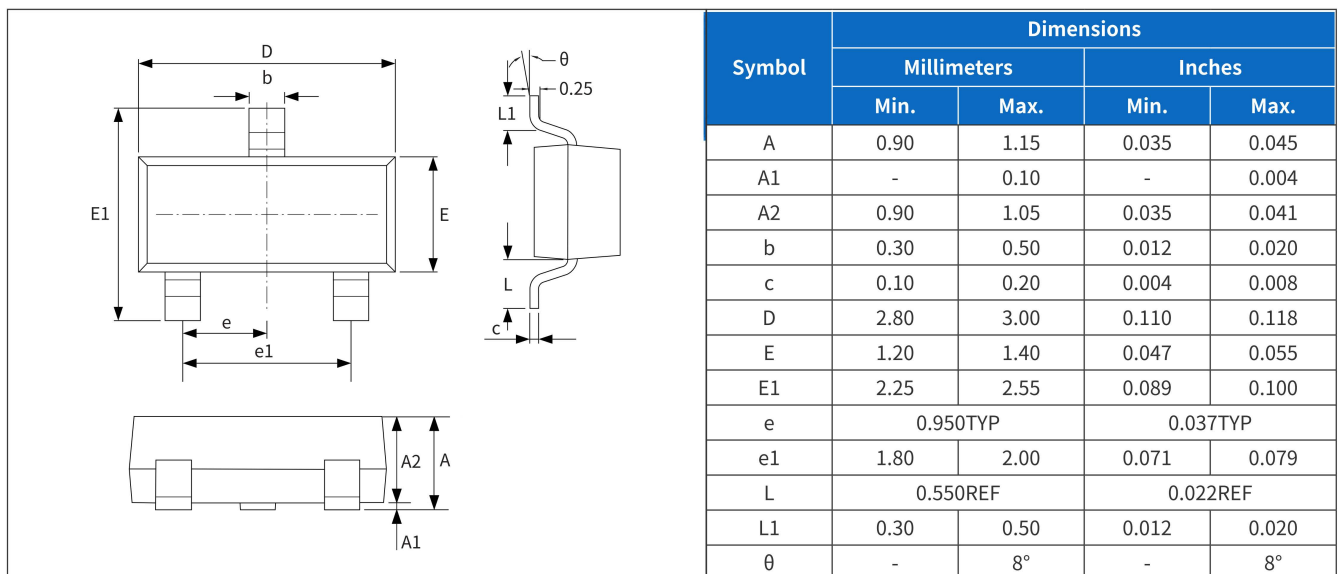
Ratings And Characteristics Curves ($T_a = 25^\circ\text{C}$ Unless otherwise specified)



Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



Package Outline Dimensions (SOT-23)



Suggested Pad Layout

