

S9013

FEATURES

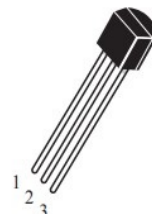
- Complementary to S9012
- Package: TO-92, SOT-23

Maximum Ratings (Ta = 25°)

Parameter	Symbol	Rating	Unit
Collector-base voltage	BV_{CBO}	40	V
Collector-emitter voltage	BV_{CEO}	25	V
Emitter-base voltage	BV_{EBO}	5	V
Collector current	I_{CM}	0.5	A
Collector Power Dissipation	P_C	SOT-23	0.3
		TO-92	0.625
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C

TO-92

1. EMITTER
2. BASE
3. COLLECTOR



SOT-23

1. BASE
2. EMITTER
3. COLLECTOR



Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, I_B=0$	25			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	5			V
collector-base cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$			0.1	μA
collector-emitter cut-off current	I_{CEO}	$V_{CE}=20V, I_B=0$			0.1	μA
emitter-base cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	H_{FE}	$V_{CE}=1V, I_C=50mA$	120		400	
		$V_{CE}=1V, I_C=500mA$	50			
collector-emitter saturation voltage	V_{CESAT}	$I_C=500mA, I_B=50mA$			0.6	V
Base-Emitter Saturation Voltage	V_{BESAT}	$I_C=500mA, I_B=50mA$			1.2	
Transition frequency	f_T	$V_{CE}=6V, I_C=20mA$	150			MHz

Classification of H_{FE}

Rank	S9013-L	S9013-H	S9013-J
Range	120-200	200-350	300-400