

S9012

FEATURES

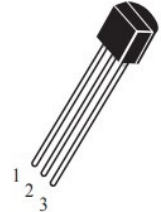
- Complementary to S9013
- Package: TO-92, SOT-23

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	W
		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	S9012-L	S9012-H	S9012-J
Range	120-200	200-350	300-400