

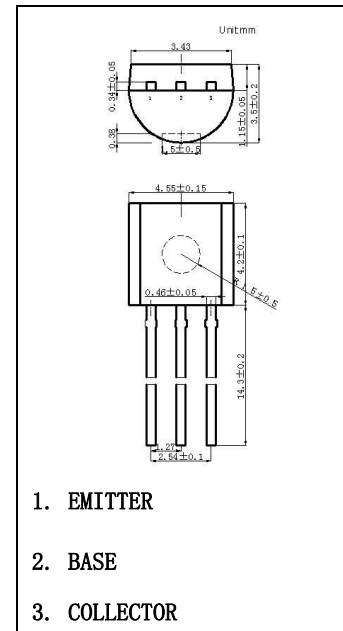
S9013 TRANSISTOR(NPN)

FEATURES

- ⌘ Complementary to S9012
- ⌘ Excellent h_{FE} linearity

MAXIMUM RATINGS(TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.5	A
P_C	Collector Power Dissipation	0.625	W
T_J	Junction Temperature	150	°C
T_{atg}	Storage Temperature	-55-150	°C



ELECTRICAL CHARACTERISTICS(Tamb=25°C unless otherwise specified):

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_C=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{ce}=20V, I_B=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	H_{FE}	$V_{ce}=1V, I_c=50mA$	64		400	
		$V_{ce}=1V, I_c=500mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Base-emitter on voltage	$V_{BE(ON)}$	$V_{ce}=1V, I_c=100mA$		0.8	1	V
Gain Bandwidth Product	fT	$V_{CE}=6V, I_C=20mA, f=30MHz$	150			MHz

CLASSIFICATION OF HFE:

Rank	D	E	F	G	H	I	J
Range	64-91	78-112	96-135	118-166	144-202	190-300	300-400

Typical Characteristics

S9013

