

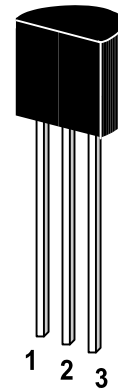
ST 9013

NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

The transistor is subdivided into three groups, G, H and I, according to its DC current gain. As complementary type the PNP transistor ST 9012 is recommended.

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Base 3. Collector

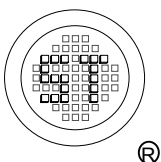
TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	800	mA
Peak Collector Current	I_{CM}	1	A
Base Current	I_B	100	mA
Power Dissipation	P_{tot}	625 ¹⁾	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

G S P FORM A IS AVAILABLE



SEMTECH ELECTRONICS LTD.

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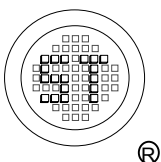
Dated : 07/12/2002

ST 9013

Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=1\text{V}$, $I_C=50\text{mA}$ Current Gain Group G H I at $V_{CE}=1\text{V}$, $I_C=500\text{mA}$	h_{FE}	110	-	183	-
	h_{FE}	177	-	250	-
	h_{FE}	250	-	380	-
	h_{FE}	40	-	-	-
Collector Cutoff Current at $V_{CB}=31\text{V}$	I_{CBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C=1\text{mA}$	$V_{(BR)CEO}$	30	-	-	V
Emitter Base Cutoff Current at $V_{EB}=5.1\text{V}$	I_{EBO}	-	-	100	nA
Collector Saturation Voltage at $I_C=500\text{mA}$, $I_B=20\text{mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Saturation Voltage at $I_C=500\text{mA}$, $I_B=20\text{mA}$	$V_{BE(sat)}$	-	-	1.2	V
Base Emitter Voltage at $V_{CE}=1\text{V}$, $I_C=50\text{mA}$	V_{BE}	0.6	-	0.75	V
Gain Bandwidth Product at $V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=50\text{MHz}$	f_T	-	100	-	MHz
Collector Base Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$	C_{CBO}	-	12	-	pF
Thermal Resistance Junction to Ambient	R_{thA}	-	-	200 ¹⁾	K/W
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ISO 14001 Certificate No. 7116

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