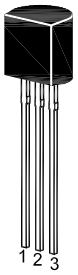
ST 9011

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into six groups, D, E, F, G, H and I, according to its DC current gain.

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



1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	mA
Power Dissipation	P_{tot}	400	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 1 mA	Current Gain Group	D	h_{FE}	28	-	45	-
		E	h_{FE}	39	-	60	-
		F	h_{FE}	54	-	80	-
		G	h_{FE}	72	-	108	-
		H	h_{FE}	97	-	146	-
		I	h_{FE}	132	-	198	-
Collector Base Cutoff Current at V_{CB} = 50 V			I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 5 V			I_{EBO}	-	-	100	nA
Collector Base Breakdown Voltage at I_C = 100 µA			$V_{(BR)CBO}$	50	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA			$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at I_E = 100 µA			$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = 10 mA, I_B = 1 mA			$V_{CE(sat)}$	-	0.08	0.3	V
Base Emitter Voltage at V_{CE} = 5 V, I_C = 1 mA			$V_{BE(on)}$	0.60	0.7	0.75	V
Collector Base Capacitance at V_{CB} = 10 V, f = 1 MHz			C_{cbo}	-	1.5	-	pF
Gain Bandwidth Product at V_{CE} = 5 V, I_C = 1 mA			f_T	150	370	-	MHz