## **PNP Silicon Epitaxial Planar Transistor**

for switching and AF amplifier applications.

The transistor is subdivided into four groups, A, B, C and D, according to its DC current gain. As complementary type the NPN transistor ST 9014 is recommended.



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

Absolute Maximum Ratings (T<sub>2</sub> = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	-V <sub>CBO</sub>	50	V
Collector Emitter Voltage	-V <sub>CEO</sub>	45	V
Emitter Base Voltage	-V <sub>EBO</sub>	5	V
Collector Current	-l <sub>C</sub>	100	mA
Power Dissipation	P <sub>tot</sub>	450	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>S</sub>	- 55 to + 150	°C

## Characteristics at T<sub>a</sub> = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 5 \text{ V}$ , $-I_C = 1 \text{ mA}$ Current Gain Group	A B C D	h <sub>FE</sub> h <sub>FE</sub> h <sub>FE</sub>	60 100 200 400	150 300 600 800	
Collector Base Cutoff Current at $-V_{CB} = 50 \text{ V}$		-I <sub>CBO</sub>	-	50	nA
Emitter Base Cutoff Current at $-V_{EB} = 5 \text{ V}$		-I <sub>EBO</sub>	•	50	nA
Collector Base Breakdown Voltage at $-I_C = 100 \mu A$		-V <sub>(BR)CBO</sub>	50	-	V
Collector Emitter Breakdown Voltage at -I <sub>C</sub> = 1 mA		-V <sub>(BR)CEO</sub>	45	-	<b>\</b>
Emitter Base Breakdown Voltage at $-I_E = 100 \mu A$		-V <sub>(BR)EBO</sub>	5	-	V
Collector Emitter Saturation Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 5 \text{ mA}$		-V <sub>CE(sat)</sub>	-	0.65	<b>\</b>
Base Emitter Saturation Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 5 \text{ mA}$		-V <sub>BE(sat)</sub>	-	1	V
Gain Bandwidth Product at $-V_{CE} = 10 \text{ V}$ , $-I_C = 10 \text{ mA}$		f⊤	100	-	MHz
Output Capacitance at $-V_{CB} = 10 \text{ V}$ , f = 1 MHz		СОВ	-	7	pF



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Dated: 02/08/2008

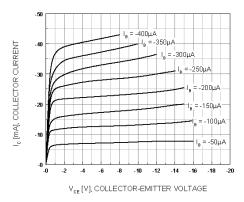


Figure 1. Static Characteristic

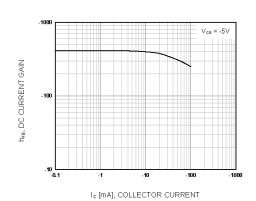


Figure 2. DC current Gain

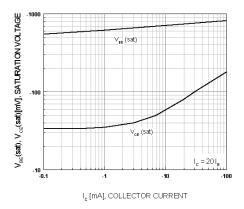


Figure 3. Base-Emitter Saturation Voltage . Collector-Emitter Saturation Voltage

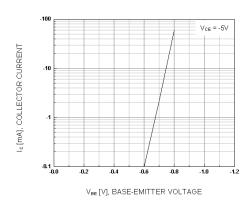


Figure 4. Base-Emitter On Voltage

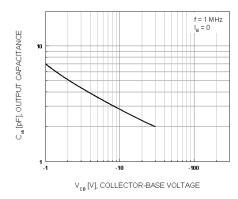


Figure 5. Collector Output Capacitance

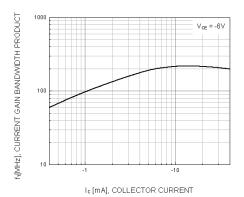


Figure 6. Current Gian Bandwidth Product



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