

# SS9015

# PNP EPITAXIAL SILICON TRANSISTOR

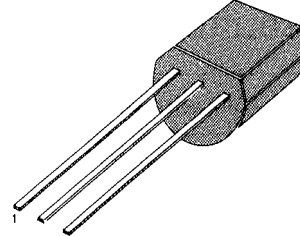
## LOW FREQUENCY, LOW NOISE AMPLIFIER

- Complement to SS9014

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25 °C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-45	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-100	mA
Collector Dissipation	P <sub>C</sub>	450	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ 150	°C

TO-92



1. Emitter 2. Base 3. Collector

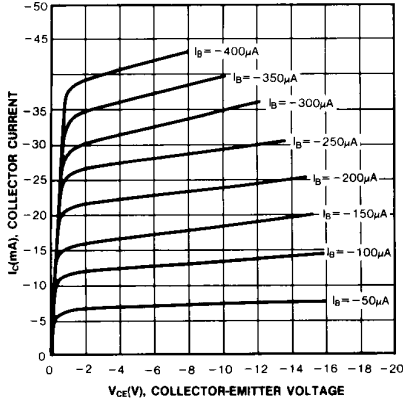
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25 °C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>C</sub> = -100 μA, I <sub>E</sub> = 0	-50			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> = -1mA, I <sub>B</sub> = 0	-45			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> = -100 μA, I <sub>C</sub> = 0	-5			V
Collector Cut-off Current	I <sub>CB0</sub>	V <sub>CB</sub> = -50V, I <sub>E</sub> = 0			-50	nA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>C</sub> = 0			-50	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -1mA	60	200	600	
Collector-Base Saturation Voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA		-0.2	-0.7	
Base-Emitter Saturation Voltage	V <sub>BE</sub> (sat)	I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA		-0.82	-1.0	V
Base-Emitter On Voltage	V <sub>BE</sub> (on)	V <sub>CE</sub> = -5V, I <sub>C</sub> = -2mA	-0.6	-0.65	-0.75	V
Output Capacitance	C <sub>OB</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0 f = 1MHz		4.5	7.0	pF
Current Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA	100	190		MHz
Noise Figure	NF	V <sub>CE</sub> = -5V, I <sub>C</sub> = -0.2mA f = 1KHz, R <sub>S</sub> = 1kΩ		0.7	10	dB

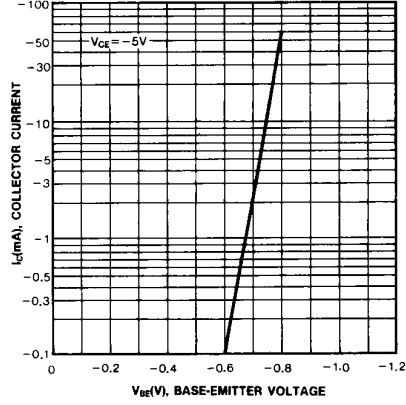
## h<sub>FE</sub> CLASSIFICATION

Classification	A	B	C
h <sub>FE</sub>	60-150	100-300	200-600

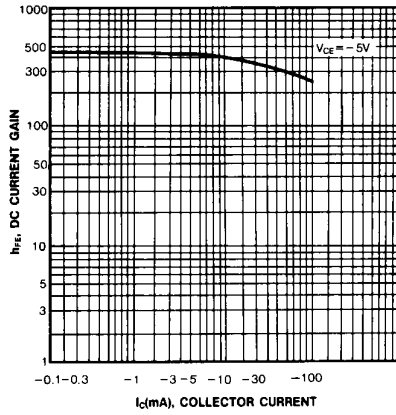
STATIC CHARACTERISTIC



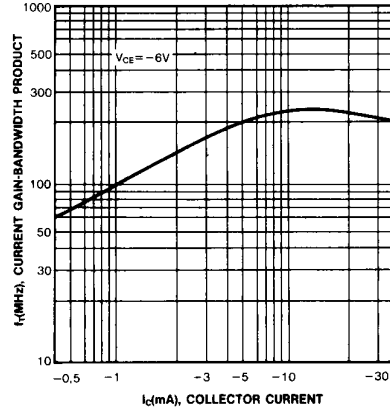
BASE-EMITTER ON VOLTAGE



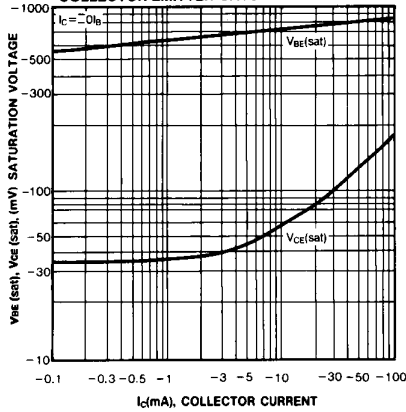
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE

