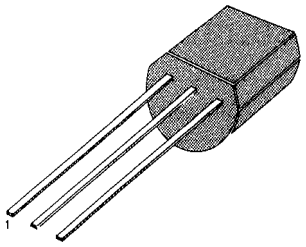
SS9014 NPN EPITAXIAL SILICON TRANSISTOR

PRE-AMPLIFIER, LOW LEVEL & LOW NOISE

- High total power dissipation. (P_T=450mW)
- High h_{FE} and good linearity
- Complementary to SS9015

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_A=25℃)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Dissipation	P_C	450	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃)

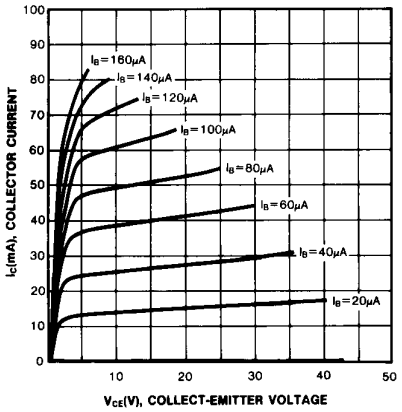
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, I_E=0	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	45			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100μA, I_C=0	5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0			50	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0			50	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=1mA	60	280	1000	
Collector-Base Saturation Voltage	V_{CE} (sat)	I_C=100mA, I_B=5mA		0.14	0.3	
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C=100mA, I_B=5mA		0.84	1.0	V
Base-Emitter On Voltage	V_{BE} (on)	V_{CE}=5V, I_C=2mA	0.58	0.63	0.7	V
Output Capacitance	C_{OB}	V_{CB}=10V, I_E=0 f=1MHz		2.2	3.5	pF
Current Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=10mA	150	270		MHz
Noise Figure	NF	V_{CE}=5V, I_C=0.2mA f=1KHz, R_S=2kΩ		0.9	10	dB

h_{FE} CLASSIFICATION

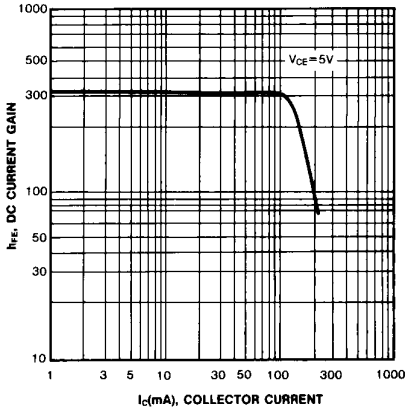
Classification	A	B	C	D
h_{FE}	60-150	100-300	200-600	400-1000

SAMSUNG ELECTRONICS

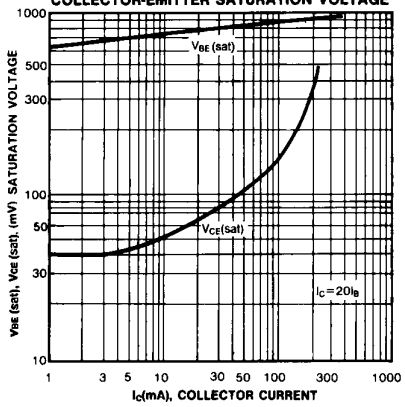
STATIC CHARACTERISTIC



DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT