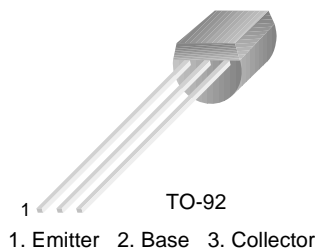


SS9016

SS9016

AM Converter, FM/RF Amplifier of Low Noise.

- High total power dissipation. ($P_T=400\text{mW}$)



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	25	mA
P_C	Collector Dissipation	400	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=100\mu\text{A}, I_E=0$	30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$	20			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\mu\text{A}, I_C=0$	4			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=30\text{V}, I_E=0$			100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=3\text{V}, I_C=0$			100	nA
h_{FE}	DC Current Gain	$V_{CE}=5\text{V}, I_C=1\text{mA}$	28	90	198	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=10\text{mA}, I_B=1\text{mA}$		0.1	0.3	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=5\text{V}, I_C=1\text{mA}$		0.72		V
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, I_E=0$ $f=1\text{MHz}$		1.2	1.6	pF
f_T	Current Gain Bandwidth Product	$V_{CE}=5\text{V}, I_C=1\text{mA}$	400	620		MHz
NF	Noise Figure	$V_{CE}=5\text{V}, I_C=1.0\text{mA}$ $f=100\text{MHz}, R_S=50\Omega$		3.0	5.0	dB

h_{FE} Classification

Classification	D	E	F	G	H	I
h_{FE}	28 ~ 45	39 ~ 60	54 ~ 80	72 ~ 108	97 ~ 146	132 ~ 198

Typical Characteristics

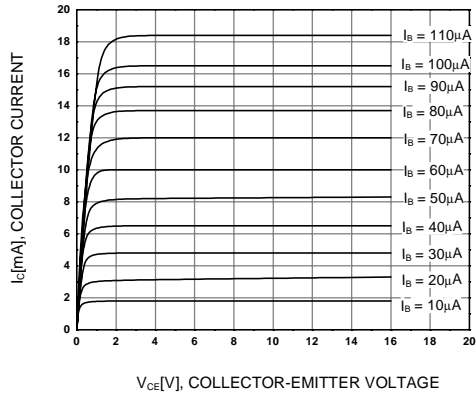


Figure 1. Static Characteristic

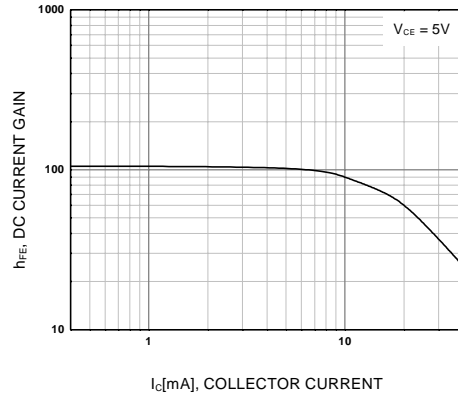


Figure 2. DC current Gain

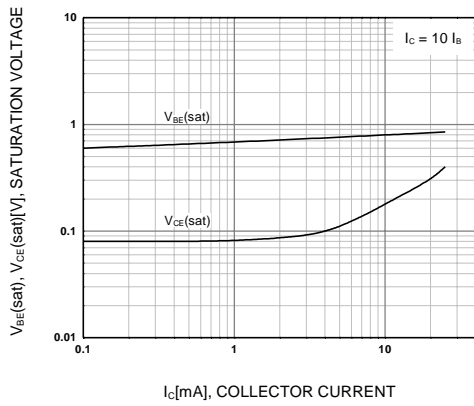


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

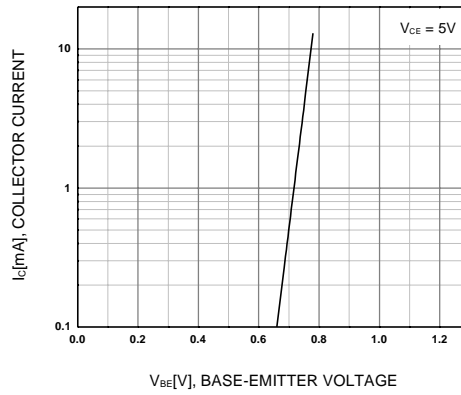


Figure 4. Base-Emitter On Voltage

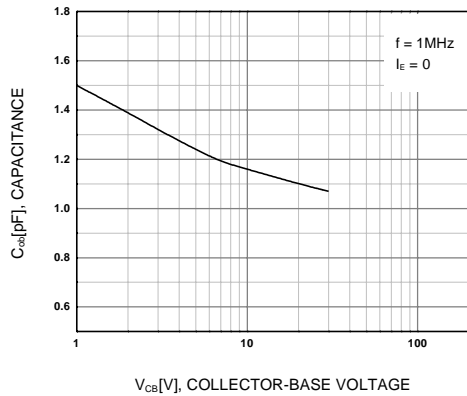


Figure 5. Collector Output Capacitance

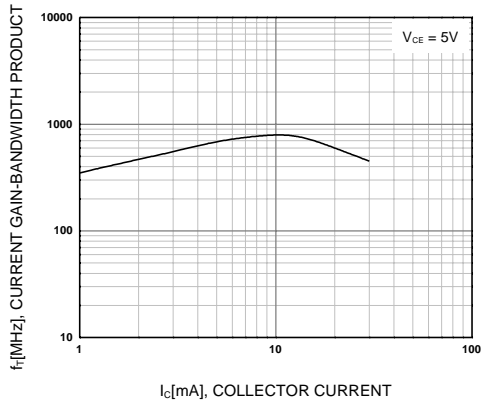
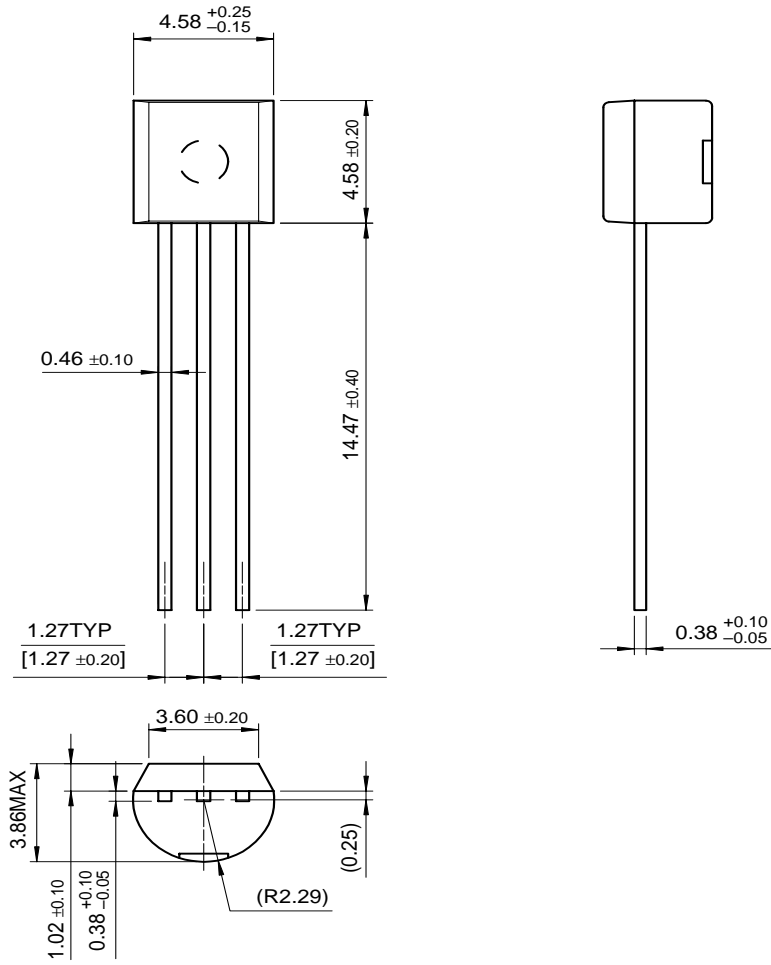


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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