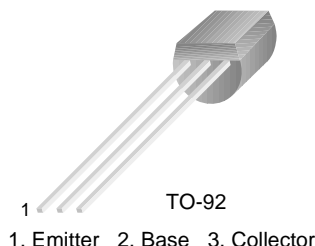


# SS9016

## 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

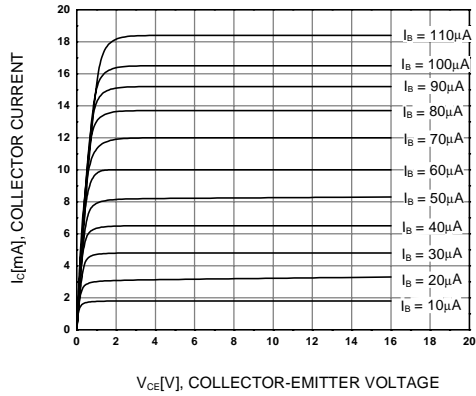


Figure 1. Static Characteristic

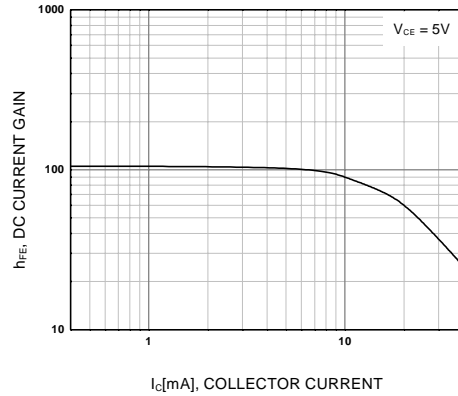


Figure 2. DC current Gain

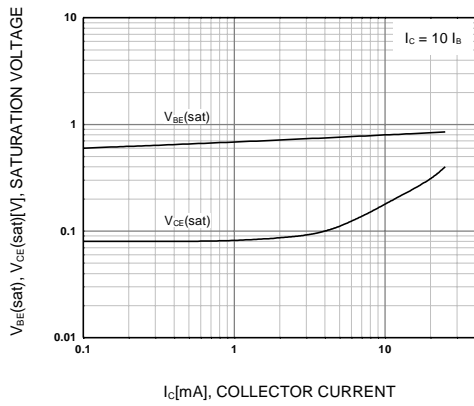


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

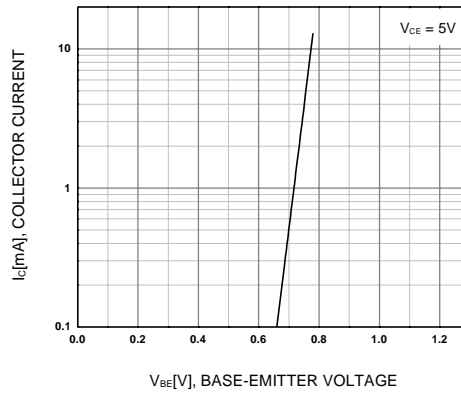


Figure 4. Base-Emitter On Voltage

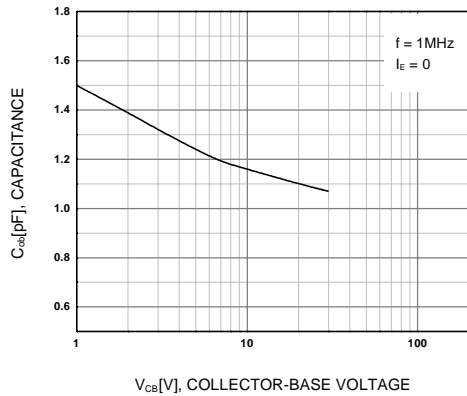


Figure 5. Collector Output Capacitance

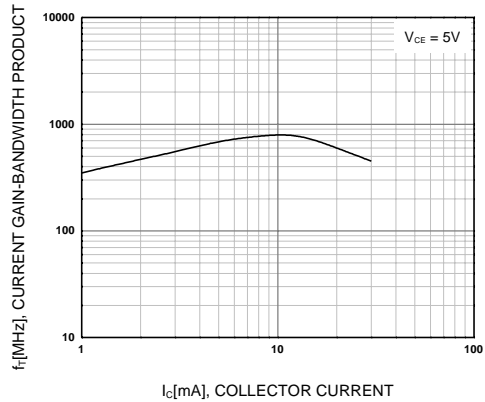
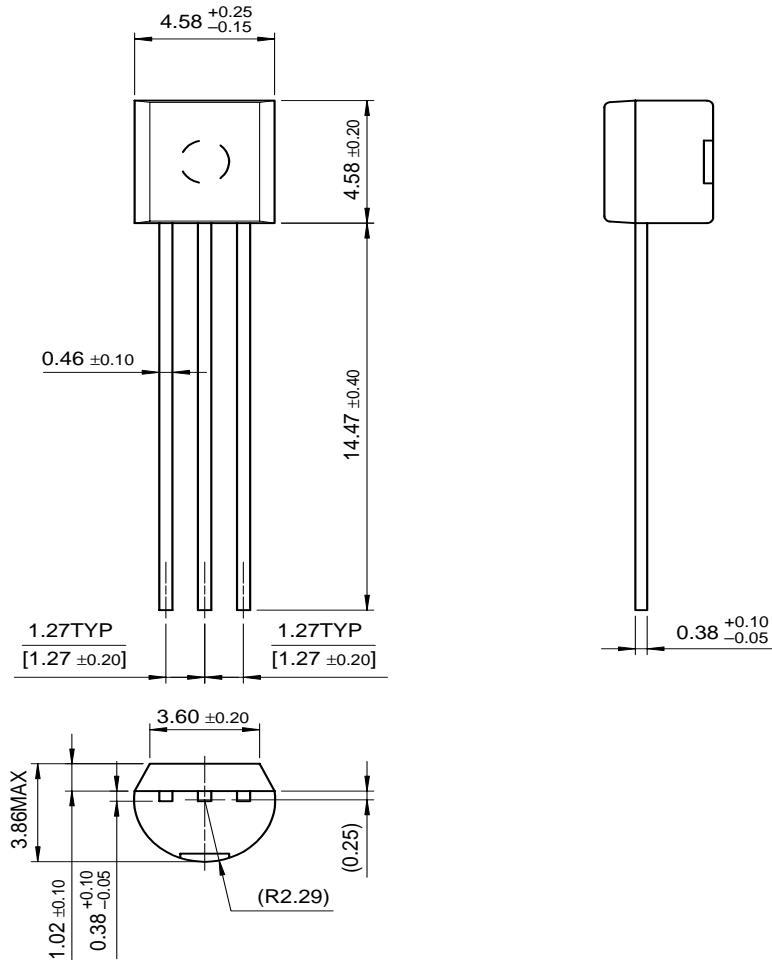


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

SS9016

## TO-92



Dimensions in Millimeters

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FACT Quiet Series™	QS™	
FAST®	Quiet Series™	
FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	

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