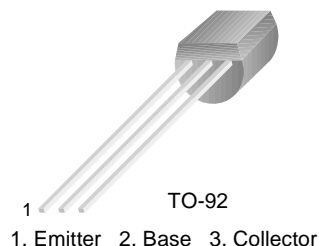


# SS9018

SS9018

## AM/FM Amplifier, Local Oscillator of FM/VHF Tuner

- High Current Gain Bandwidth Product  $f_T=1.1$  GHz (Typ)



## 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	15	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	50	mA
$P_C$	Collector Power 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	$I_C=1.0\text{mA}$ , $I_B=0$	15			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=100\mu\text{A}$ , $I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=12\text{V}$ , $I_E=0$			50	nA
$h_{FE}$	Emitter Cut-off Current	$V_{CE}=5\text{V}$ , $I_C=1.0\text{mA}$	28	100	198	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=10\text{mA}$ , $I_B=1\text{mA}$			0.5	V
$C_{ob}$	Output Capacitance	$V_{CB}=10\text{V}$ , $I_E=0$ $f=1\text{MHz}$		1.3	1.7	pF
$f_T$	Current Gain Bandwidth Product	$V_{CE}=5\text{V}$ , $I_C=5\text{mA}$	700	1100		MHz

### $h_{FE}$ Classification

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

# Typical Characteristics

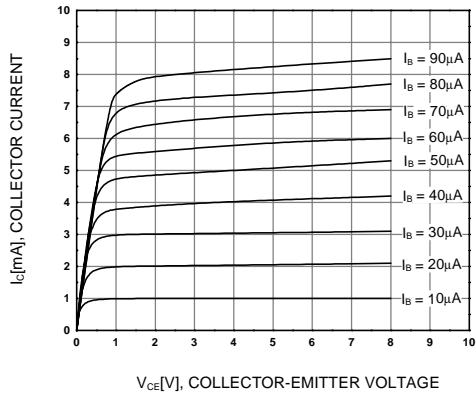


Figure 1. Static Characteristic

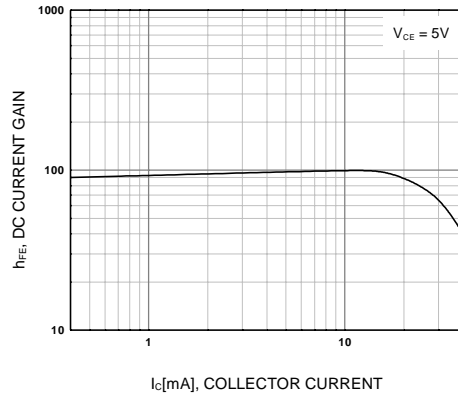


Figure 2. DC current Gain

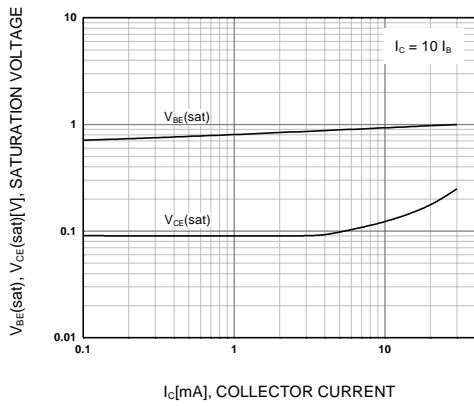


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

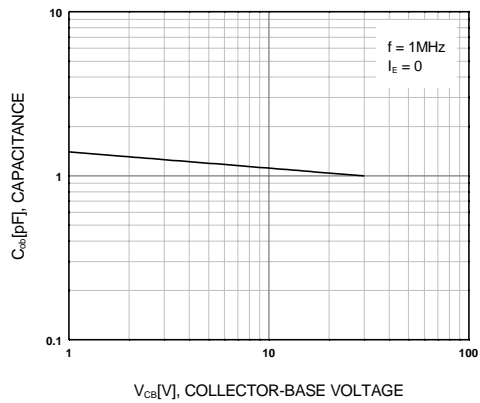


Figure 4. Output Capacitance

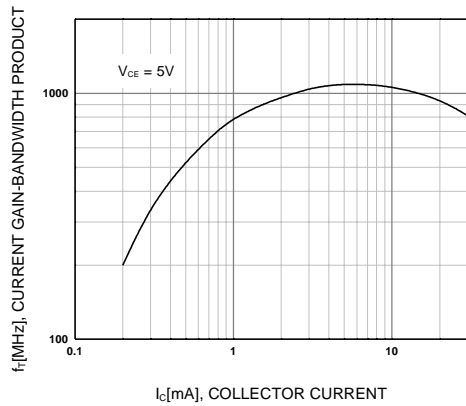
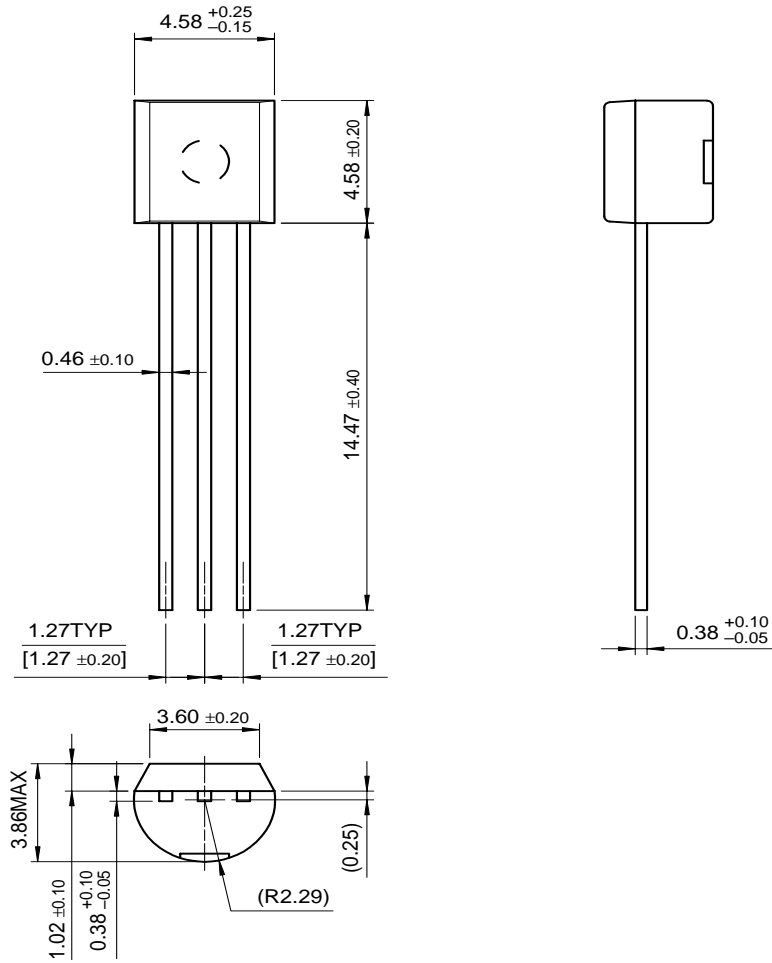


Figure 5. Current Gain Bandwidth Product

# Package Dimensions

SS9018

## TO-92



Dimensions in Millimeters

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CoolFET <sup>™</sup>	FAST <sup>r</sup> <sup>™</sup>	MicroFET <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
CROSSVOL <sup>T</sup> <sup>™</sup>	FRFET <sup>™</sup>	MicroPak <sup>™</sup>	QFET <sup>™</sup>	SuperSOT <sup>™</sup> -8
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