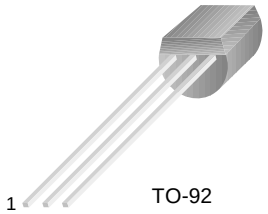
FAIRCHILD
SEMICONDUCTOR®

SS9011

AM Converter, AM/FM IF Amplifier
General Purpose Transistor



TO-92

1. Emitter 2. Base 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	30	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 100μA, I_E =0	50			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C =1mA, I_B =0	30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 100μA, I_C =0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 50V, I_E =0			100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C =0			100	nA
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 1mA	28	90	198	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C = 10mA, I_B = 1mA		0.08	0.3	V
V_{BE} (on)	Base-Emitter on Voltage	V_{CE} = 5V, I_C = 1mA	0.65	0.7	0.75	V
C_{ob}	Output Capacitance	V_{CB} = 10V, I_E = 0 f = 1MHz	 150	1.5 370		pF
f_T	Current Gain Bandwidth Product	V_{CE} = 5V, I_C = 1mA		2.0		MHz
NF	Noise Figure	V_{CE} = 5V, I_C = 1.0 mA f=1MHz, R_S = 500Ω			4.0	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

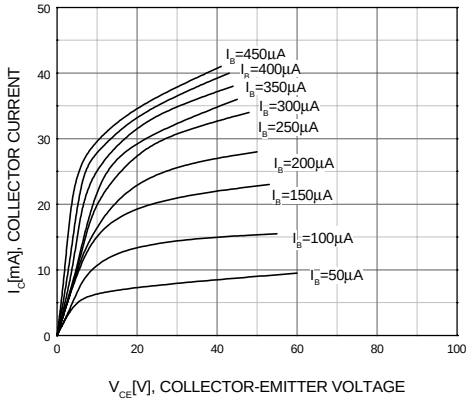


Figure 1. Static Characteristic

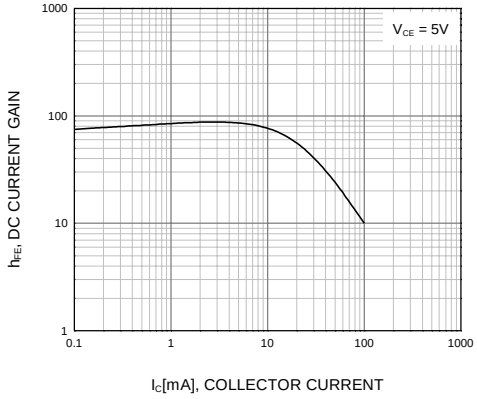


Figure 2. DC current Gain

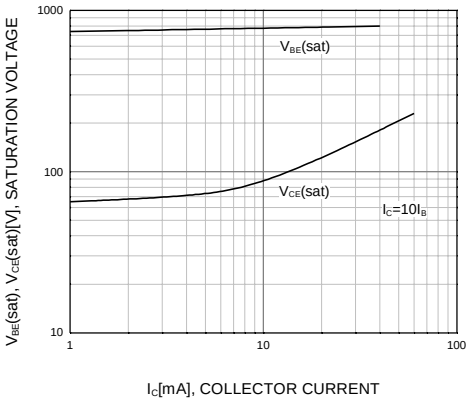


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

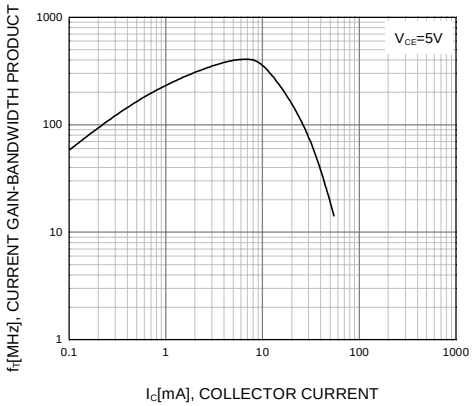
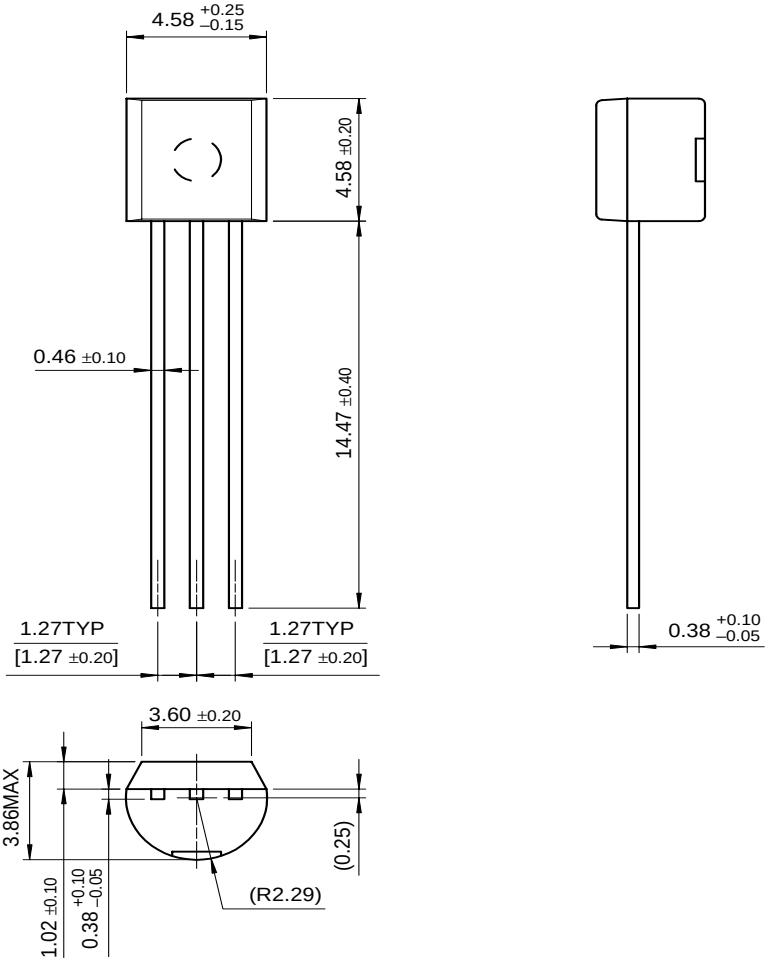


Figure 4. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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