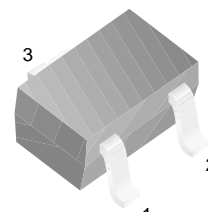


## FJX945

### Audio Frequency Amplifier High Frequency OSC.

- Collector-Base Voltage  $V_{CBO}=60V$
- High Current Gain Bandwidth Product  $f_T=300MHz$  (Typ)
- Complement to FJX733



1 SOT-323  
1. Base 2. Emitter 3. Collector

### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	150	mA
$P_C$	Collector Power Dissipation	200	mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

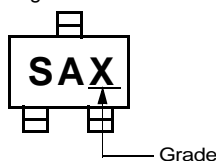
#### Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	60			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10mA, I_B=0$	50			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=40V, I_E=0$			0.1	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=3V, I_C=0$			0.1	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE}=6V, I_C=1.0mA$	40		700	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100mA, I_B=10mA$		0.15	0.3	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=6V, I_C=10mA$		300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=6V, I_E=0$ $f=1MHz$		2.5		pF
NF	Noise Figure	$V_{CE}=6V, I_E=-0.5mA$ $f=1KHz, R_S=500\Omega$		4.0		dB

### $h_{FE}$ Classification

Classification	R	O	Y	G	L
$h_{FE}$	40 ~ 80	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700

Marking



# Typical Characteristics

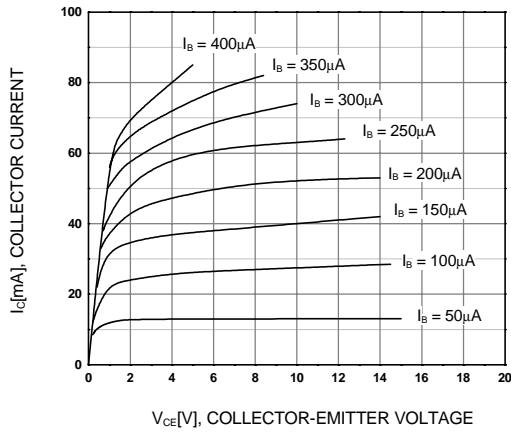


Figure 1. Static Characteristic

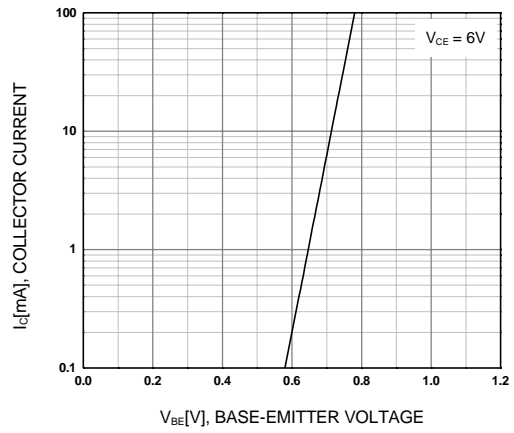


Figure 2. Transfer Characteristic

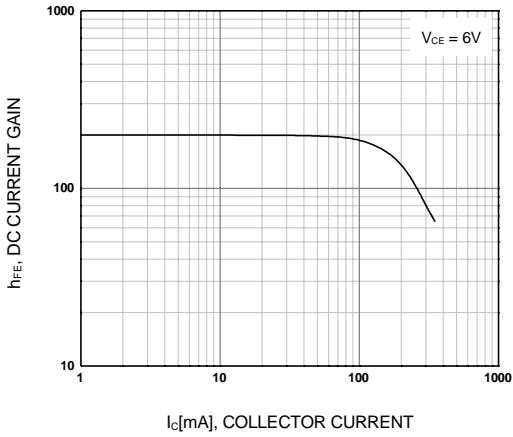


Figure 3. DC current Gain

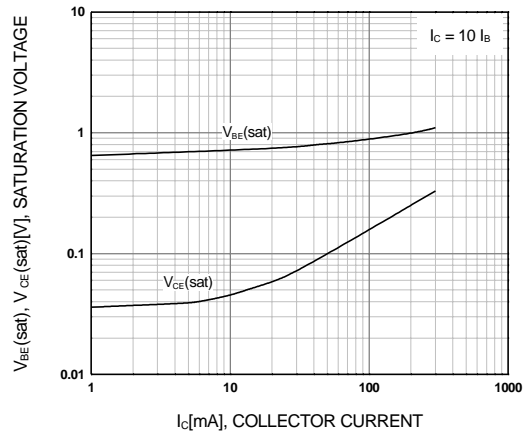


Figure 4. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

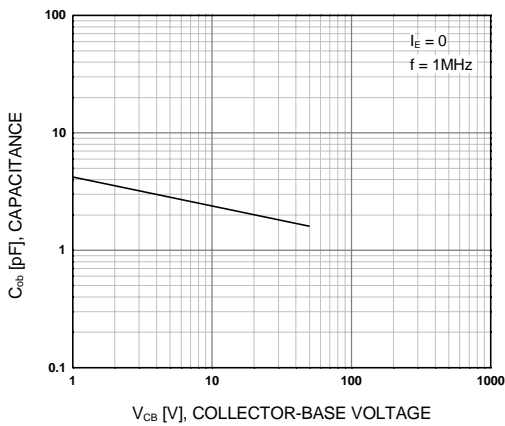


Figure 5. Collector Output Capacitance

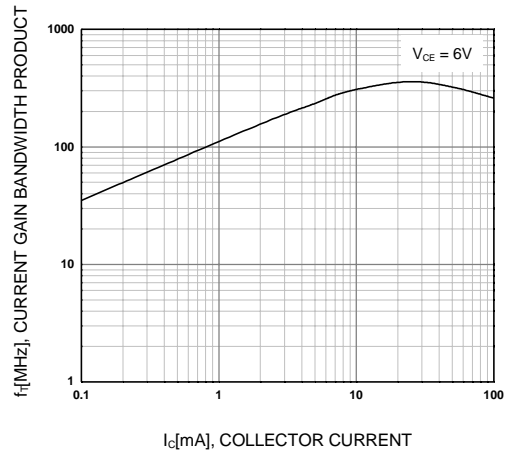
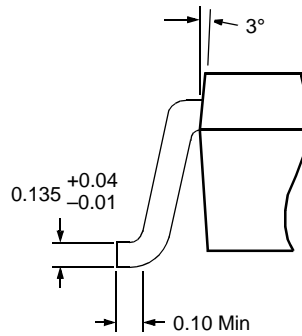
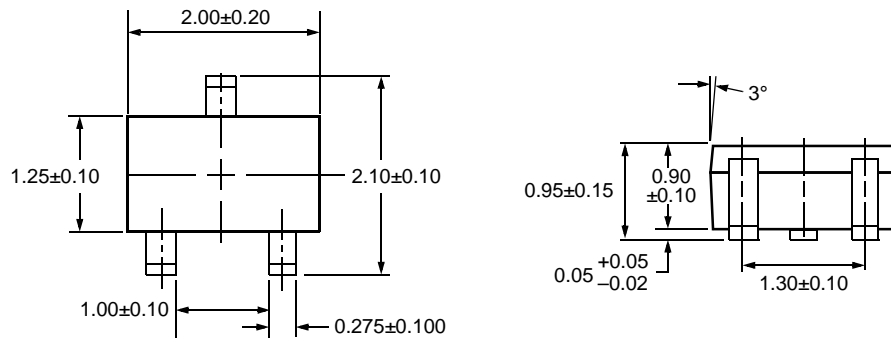


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

FJX945

## SOT-323



Dimensions in Millimeters

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### Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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FJX945

NPN Epitaxial Silicon Transistor

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Features

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
FJX945OTF	Full Production	\$0.063	SOT-323	3	TAPE REEL
FJX945RTF	Full Production	\$0.063	SOT-323	3	TAPE REEL
FJX945YTF	Full Production	\$0.063	SOT-323	3	TAPE REEL
FJX945GTF	Full Production	\$0.063	SOT-323	3	TAPE REEL

\* 1,000 piece Budgetary Pricing

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