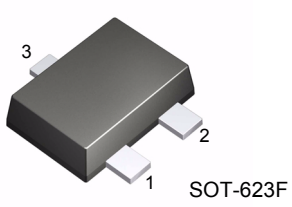
FAIRCHILD
SEMICONDUCTOR®

FJZ945

Audio Frequency Amplifier & High Frequency OSC.

- Complement to FJZ733
- Collector-Base Voltage : V_{CBO}=60V
- High Current Gain Bandwidth Product : f_T=300MHz (Typ.)



SOT-623F

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°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	100	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	60			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=10mA, I_B=0	50			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=10μA, I_C=0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB}=40V, I_E=0			0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}=3V, I_C=0			0.1	μA
h_{FE}	DC Current Gain	V_{CE}=6V, I_C=1.0mA	70		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_C=0.5mA f=1KHz, R_S=500Ω		4.0		dB

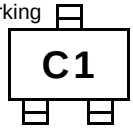
Thermal Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	1250	°C/W

h_{FE} Classification & Marking

Classification	O	Y	G	L
h_{FE}	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700
Marking	C3	C1	C4	C5

Marking



Typical Characteristics

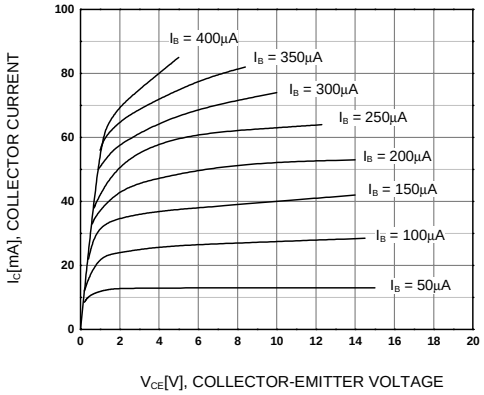


Figure 1. Static Characteristic

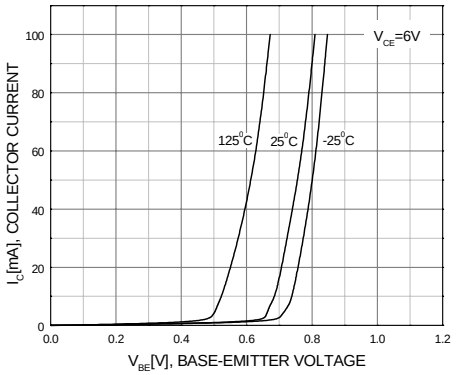


Figure 2. Transfer Characteristic

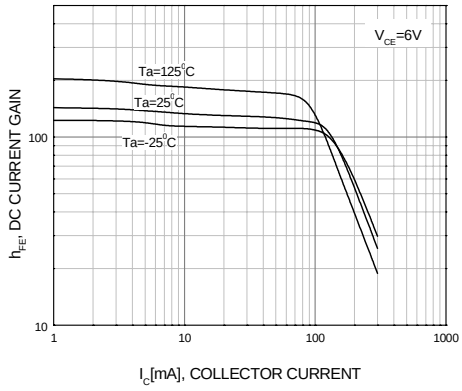


Figure 3. DC Current Gain

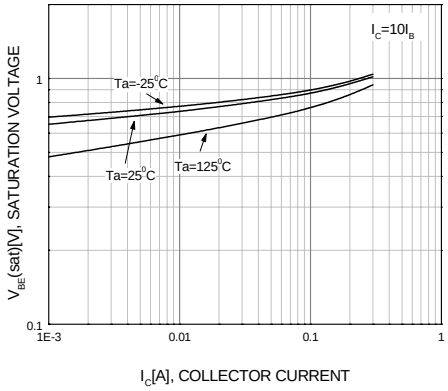


Figure 4. Base-Emitter Saturation Voltage

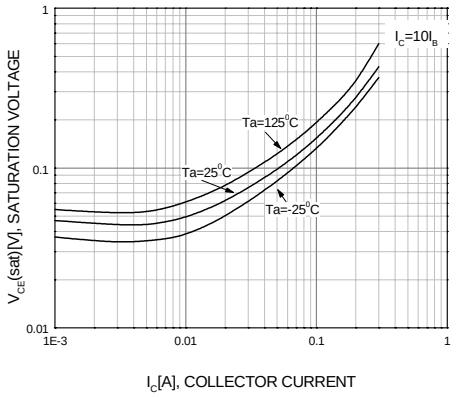


Figure 5. Collector-Emitter Saturation Voltage

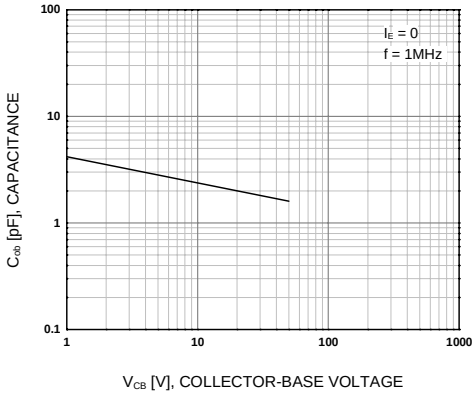


Figure 6. Output Capacitance

Typical Characteristics (Continued)

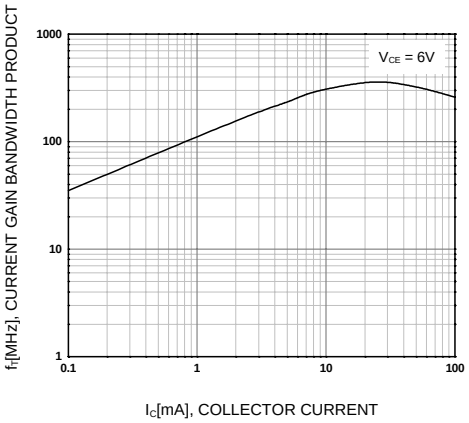
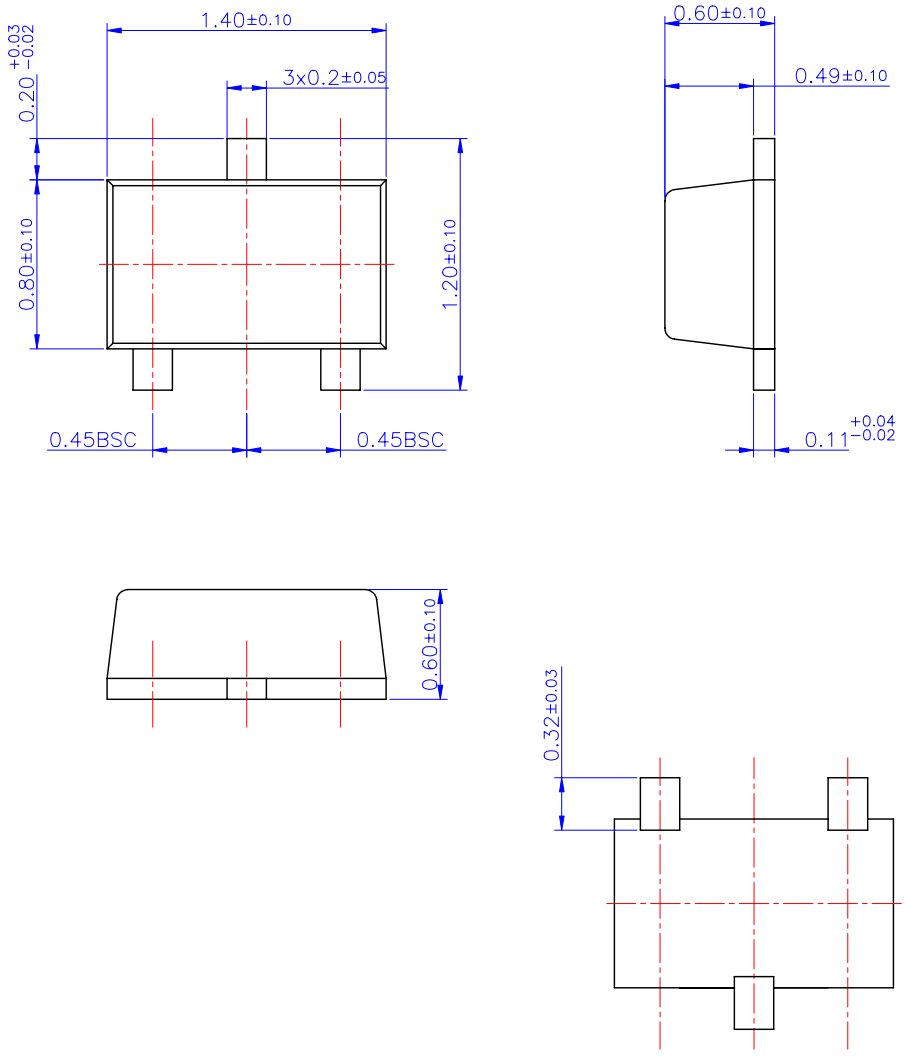


Figure 7. Current Gain Bandwidth Product

Package Dimensions

SOT-623F



Dimensions in Millimeters

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CoolFET™	FPS™	MICROCOUPLER™	PowerSaver™	SuperSOT™-3
CROSSVOLT™	FRFET™	MicroFET™	PowerTrench®	SuperSOT™-6
DOME™	GlobalOptoisolator™	MicroPak™	QFET®	SuperSOT™-8
EcoSPARK™	GTO™	MICROWIRE™	QS™	SyncFET™
E^2CMOS™	HiSeC™	MSX™	QT Optoelectronics™	TinyLogic®
EnSigna™	I^2C™	MSXPro™	Quiet Series™	TINYOPTO™
FACT™	*i-Lo*™	OCX™	RapidConfigure™	TruTranslation™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	VCX™

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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