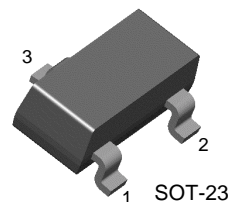


## FJV992

### Audio Frequency Low Noise Amplifier

- Complement to FJV1845



1. Base 2. Emitter 3. Collector

### PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-50	mA
$P_C$	Collector Power Dissipation	300	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

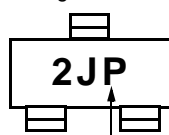
#### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-120		V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}, I_B = 0$	-120		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
$I_{EBO}$	Emitter-Base Cutoff Current	$V_{EB} = -6\text{V}, I_C = 0$		-30	nA
$h_{FE1}$ $h_{FE2}$	DC Current Gain	$V_{CE} = -6\text{V}, I_C = -0.1\text{mA}$ $V_{CE} = -6\text{V}, I_C = -1\text{mA}$	150 200	800	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1\text{mA}$		-300	mV
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	-0.55	-0.65	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	50		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = -30\text{V}, I_E = 0, f = 1\text{MHz}$		3	pF
NV	Noise Voltage	$V_{CE} = -5.0\text{V}, I_C = -1.0\text{mA},$ $R_G = 100\text{KW}, G_V = 80\text{dB},$ $f = 10\text{Hz to } 1.0\text{KHz}$		40	mV

#### $h_{FE2}$ Classification

Classification	P	F	E
$h_{FE2}$	200 ~ 400	300 ~ 600	400 ~ 800

Marking



$h_{FE}$  Classification

# Typical Characteristics

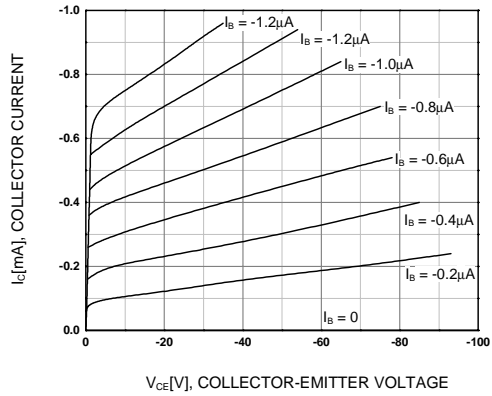


Figure 1. Static Characteristic

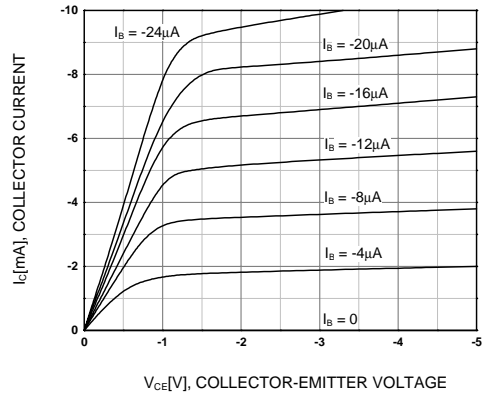


Figure 2. Static Characteristic

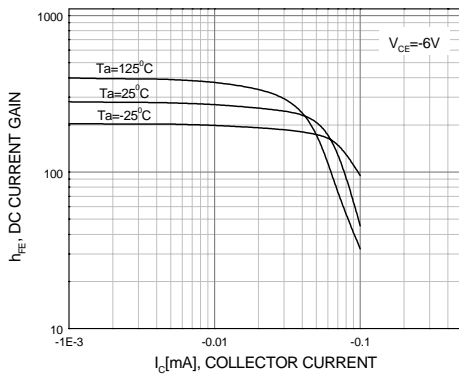


Figure 3. DC current Gain

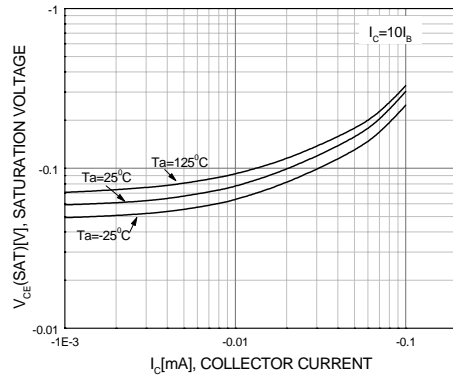


Figure 4. Collector-Emitter Saturation Voltage

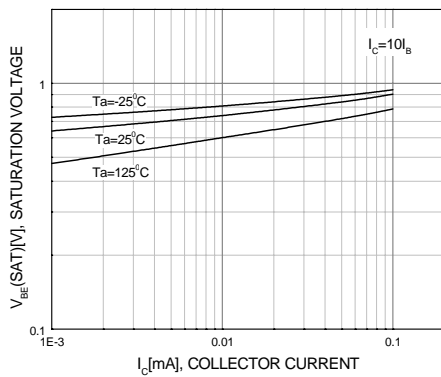


Figure 5. Base-Emitter Saturation Voltage

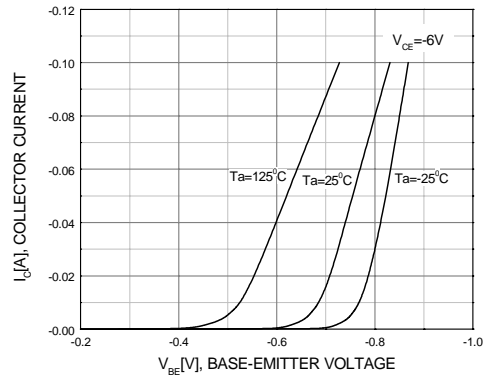


Figure 6. Base-Emitter Voltage

Typical Characteristics (Continued)

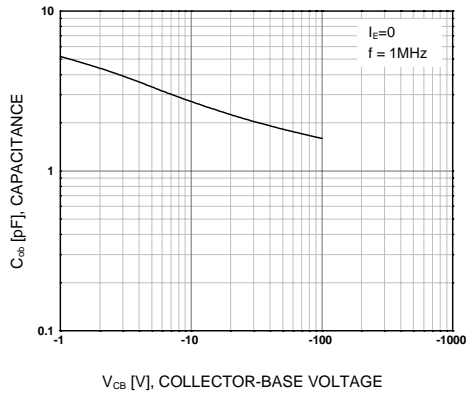


Figure 7. Collector Output Capacitance

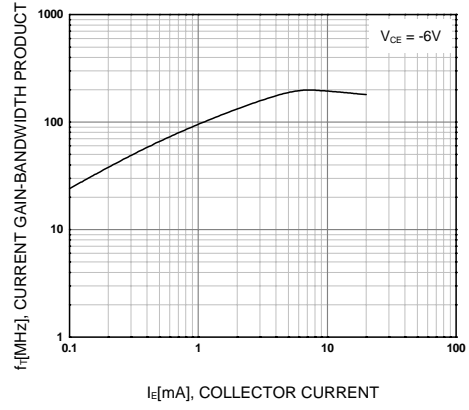


Figure 8. Current Gain Bandwidth Product

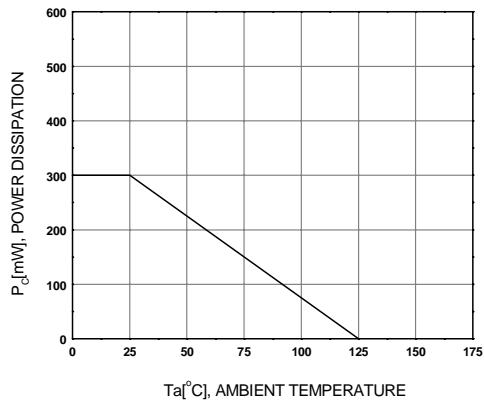
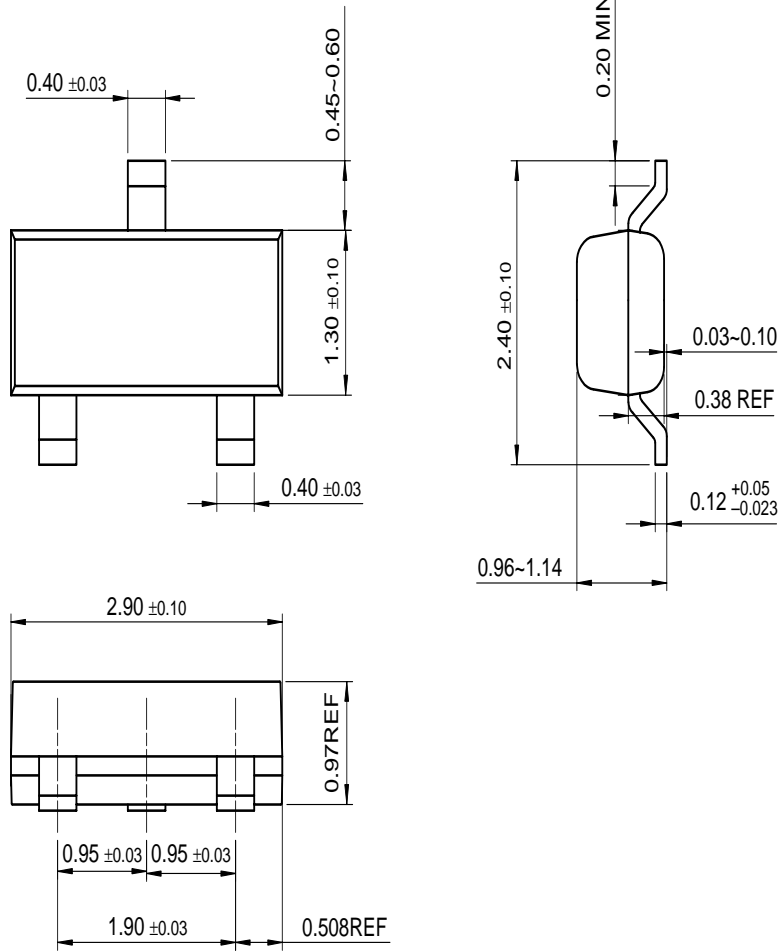


Figure 9. Power Derating

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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