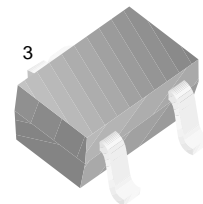


## FJX733

### Low Frequency Amplifier

- Collector-Base Voltage  $V_{CBO} = -60V$
- Complement to FJX945



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

### PNP Epitaxial Silicon Transistor

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

| Symbol    | Parameter                   | Ratings   | 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 | $^\circ C$ |

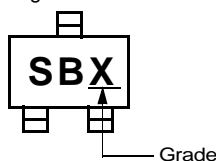
#### Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

| Symbol        | Parameter                            | Test Condition  | Min.  | Typ.  | Max.  | Units |
|---------------|--------------------------------------|---|-------|-------|-------|-------|
| $BV_{CBO}$    | Collector-Base Breakdown Voltage     | $I_C = -100, I_E = 0$                                 | -60   |       |       | V     |
| $BV_{CEO}$    | Collector-Emitter Breakdown Voltage  | $I_C = -10mA, I_B = 0$                                | -50   |       |       | V     |
| $BV_{EBO}$    | Emitter-Base Breakdown Voltage       | $I_E = -10, I_C = 0$                                  | -5    |       |       | V     |
| $I_{CBO}$     | Collector Cut-off Current            | $V_{CB} = -25V, I_E = 0$                              |       |       | -100  | nA    |
| $I_{EBO}$     | Emitter Cut-off Current              | $V_{EB} = -3V, I_C = 0$                               |       |       | -100  | nA    |
| $h_{FE}$      | DC Current Gain                      | $V_{CE} = -6V, I_C = -1mA$                            | 40    |       | 700   |       |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -100mA, I_B = -10mA$                           |       | -0.18 | -0.3  | V     |
| $V_{BE(on)}$  | Base-Emitter On Voltage              | $V_{CE} = -6V, I_C = -1mA$                            | -0.50 | -0.62 | -0.80 | V     |
| $f_T$         | Current Gain Bandwidth Product       | $V_{CE} = -6V, I_C = -10mA$                           | 50    | 180   |       | MHz   |
| $C_{ob}$      | Output Capacitance                   | $V_{CB} = -10V, I_E = 0$<br>$f = 1MHz$                |       | 2.8   |       | pF    |
| NF            | Noise Figure                         | $V_{CE} = -6V, I_C = -0.3mA$<br>$f = 1MHz, R_s = 10K$ |       | 6.0   | 20    | 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

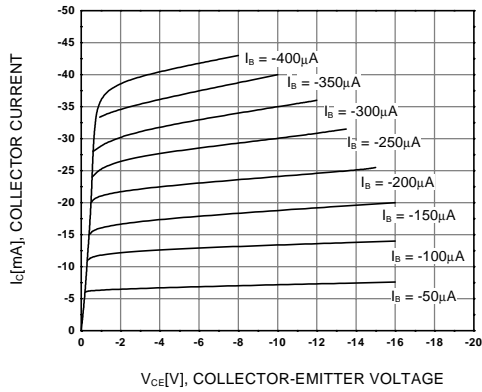


Figure 1. Static Characteristic

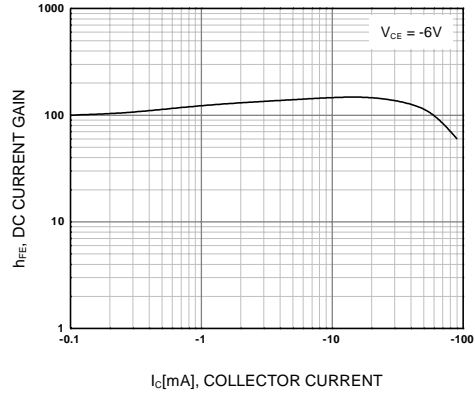


Figure 2. DC current Gain

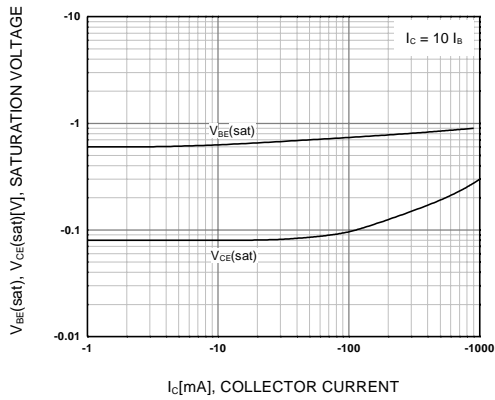


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

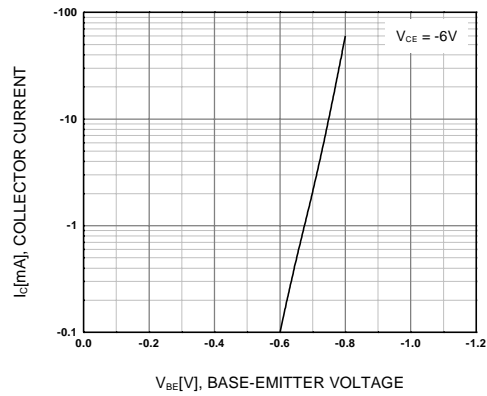


Figure 4. Base-Emitter On Voltage

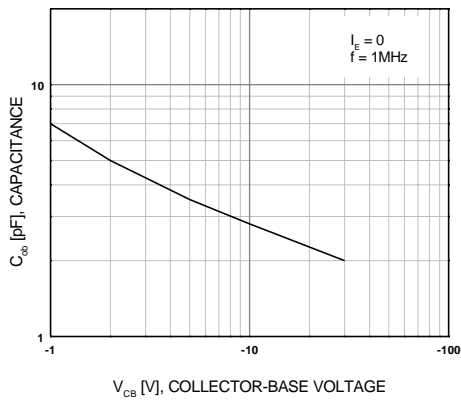


Figure 5. Collector Output Capacitance

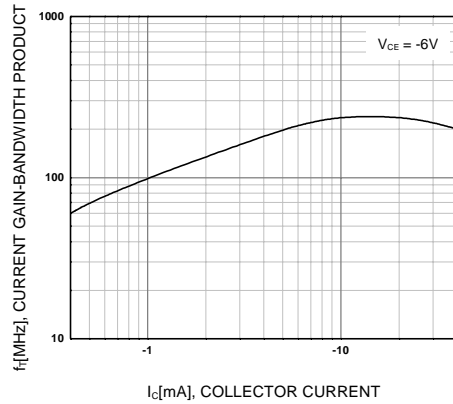
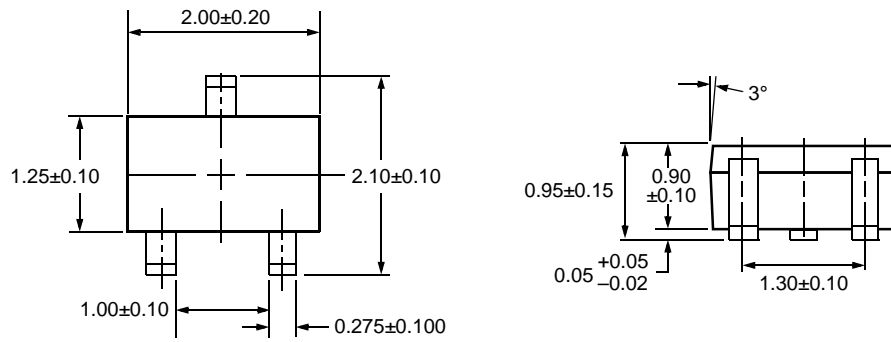


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

## SOT-323



Dimensions in Millimeters

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