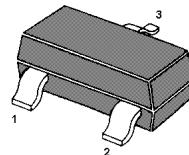


## PNP Silicon Epitaxial Planar Transistor

for audio frequency, general purpose amplifier.

The transistor is subdivided into four groups O, Y, G and L, according to its DC current gain.



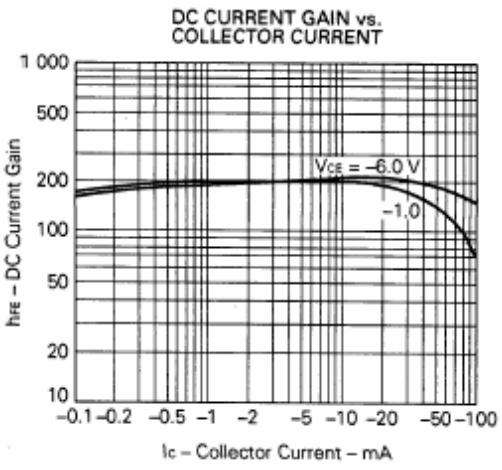
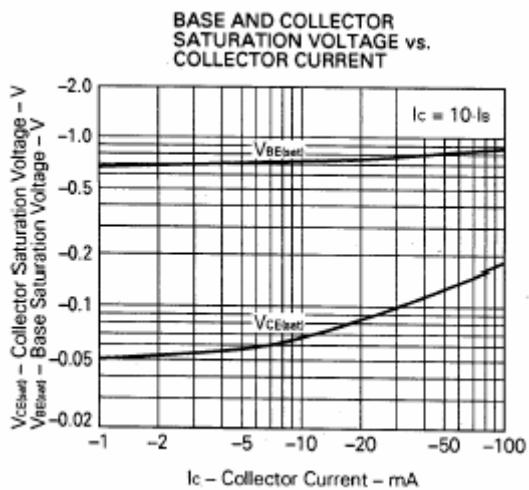
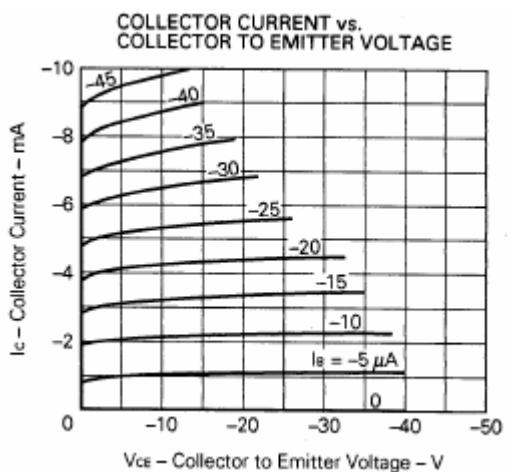
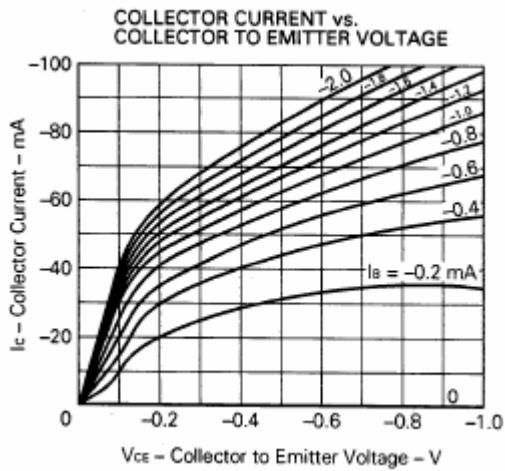
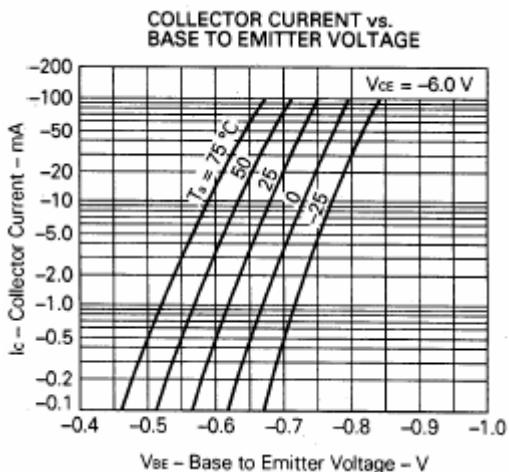
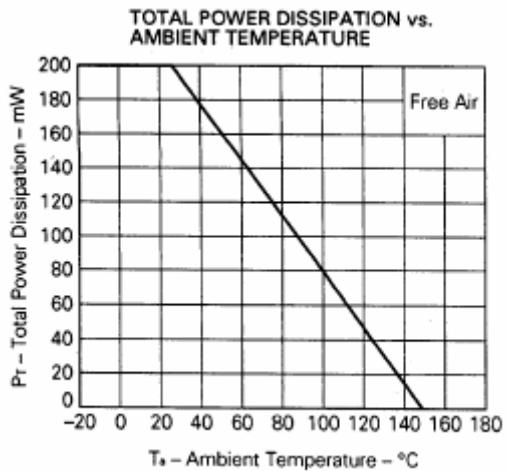
1.Base 2.Emitter 3.Collector  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

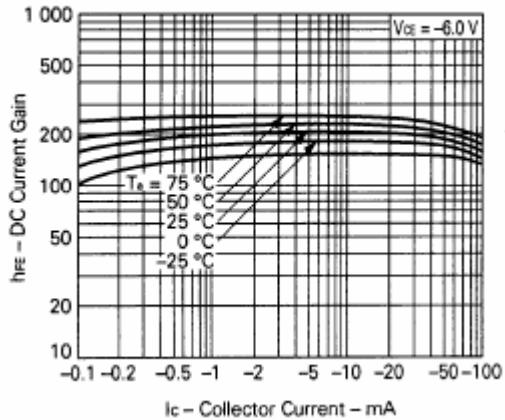
|                           | Symbol     | Value       | Unit             |
|---------------------------|------------|-------------|------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 60          | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 50          | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5           | V                |
| Collector Current         | $-I_C$     | 100         | mA               |
| Power Dissipation         | $P_{tot}$  | 200         | mW               |
| Junction Temperature      | $T_j$      | 150         | $^\circ\text{C}$ |
| Storage Temperature Range | $T_s$      | -55 to +150 | $^\circ\text{C}$ |

### Characteristics at $T_{amb}=25^\circ\text{C}$

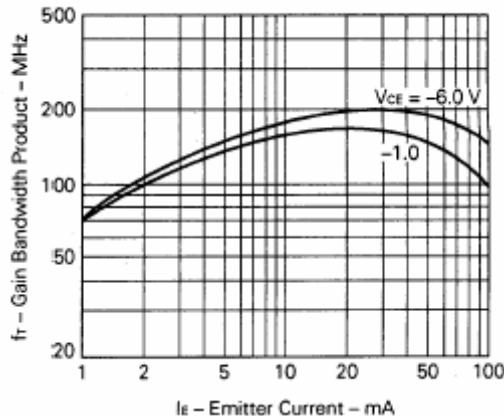
|   | Symbol         | Min. | Typ. | Max. | Unit          |
|---|----------------|------|------|------|---------------|
| DC Current Gain<br>at $-V_{CE}=6\text{V}$ , $-I_C=1\text{mA}$               |                |      |      |      |               |
| Current Gain Group<br><br>O   | $h_{FE}$       | 90   | -    | 180  | -             |
| Y   | $h_{FE}$       | 135  | -    | 270  | -             |
| G   | $h_{FE}$       | 200  | -    | 400  | -             |
| L   | $h_{FE}$       | 300  | -    | 600  | -             |
| Collector Cutoff Current<br>at $-V_{CB}=60\text{V}$                         | $-I_{CBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| Emitter Cutoff Current<br>at $-V_{EB}=5\text{V}$                            | $-I_{EBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| Collector Saturation Voltage<br>at $-I_C=100\text{mA}$ , $-I_B=10\text{mA}$ | $-V_{CE(sat)}$ | -    | -    | 0.3  | V             |
| Base Emitter Voltage<br>at $-V_{CE}=6\text{V}$ , $-I_C=1\text{mA}$          | $-V_{BE}$      | 0.58 | -    | 0.68 | V             |
| Gain Bandwidth Product<br>at $-V_{CE}=6\text{V}$ , $-I_C=10\text{mA}$       | $f_T$          | -    | 180  | -    | MHz           |
| Output Capacitance<br>at $-V_{CB}=10\text{V}$ , $f=1\text{MHz}$             | $C_{OB}$       | -    | 4.5  | -    | pF            |



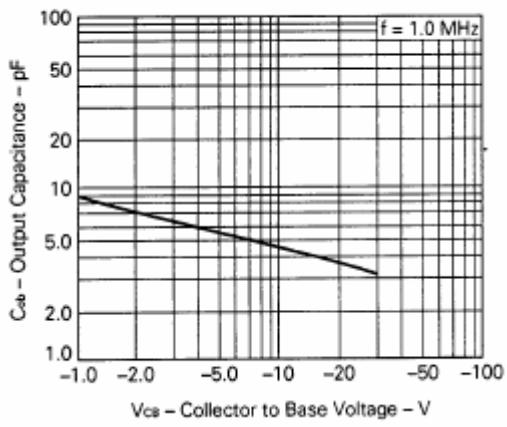
DC CURRENT GAIN vs.  
COLLECTOR CURRENT



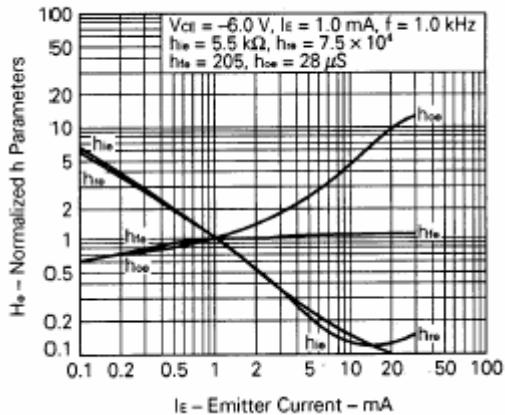
GAIN BANDWIDTH PRODUCT vs.  
EMITTER CURRENT



OUTPUT CAPACITANCE vs.  
REVERSE VOLTAGE



NORMALIZED h PARAMETER vs.  
EMITTER CURRENT



NORMALIZED h PARAMETER vs.  
COLLECTOR TO Emitter VOLTAGE

