

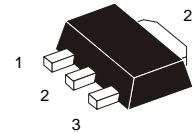
The Small-signal NPN Silicon High Voltage Medium-Power Transistor

DESCRIPTION

The BF620 is an NPN silicon epitaxial transistor designed for application as a video output to drive color CRT, telephony, professional communication equipment and other high voltage applications.

It has dynamic range and good current characteristic.

This high voltage transistor in 3-Pin mini power plastic package SOT89 offers superior quality and performance at low cost.



1 – Base
2 – Collector
3 – Emitter

FEATURES

- Low Saturation Voltages
 $V_{CE(sat)} = 0.6 \text{ V}$
 $V_{BE(sat)} = 0.9 \text{ V}$
- High Breakdown Voltages
 $V_{(BR)CBO} = 300 \text{ V}$
 $V_{(BR)CEO} = 300 \text{ V}$
- Low Collector Current
 $I_C = 50 \text{ mA}$
- Complementary to BF621

| | |
|---------|--------|
| | SOT89 |
| JEDEC | TO-243 |
| EIAJ | SC-62 |
| GOST | KT-47 |
| Weight: | 0.055g |

ABSOLUTE MAXIMUM RATINGS ($T_A = 25 \text{ }^\circ\text{C}$)

| Rating | Symbol | Value | Unit |
|--------------------------------------|------------|--------------------|------------------|
| Collector – Emitter Voltage | V_{CEO} | 300 | V |
| Collector – Base Voltage | V_{CBO} | 300 | V |
| Emitter – Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 50 | mA |
| Peak Collector Current | I_{CM} | 100 | mA |
| Collector Dissipation | P_C | 1.0 | W |
| Junction Temperature | T_{JMAX} | 150 | $^\circ\text{C}$ |
| Operating Junction Temperature Range | T_{OPR} | -60 to +100 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | $^\circ\text{C}$ |

ORDERING INFORMATION

| Device | Marking | Package | Quantity | Packing Style |
|----------|---------|---------|-----------------------|---|
| BF620 | DC | SOT-89 | 5 Kpcs / plastic bags | In bulk |
| BF620-T1 | DC | SOT-89 | 1 Kpcs / Reel | Embossed tape 12-mm wide 7" dia. Pin 2 (Collector) towards the windung. Perforation on the right. |

BF620

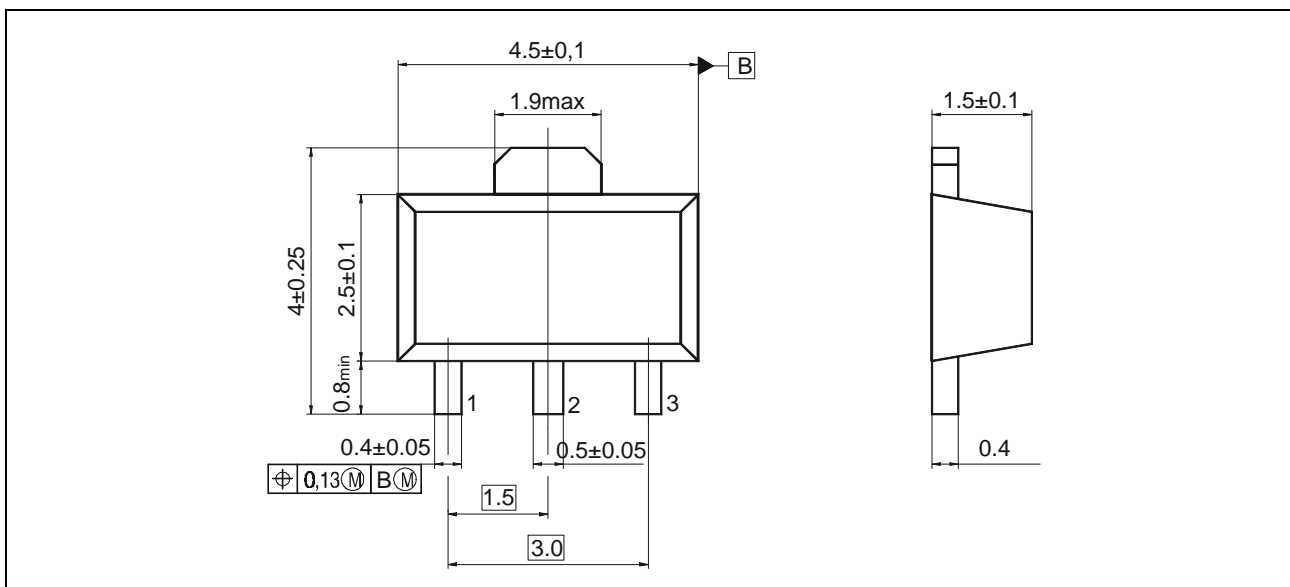
ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|---------------|------------|-----|-----------|------|
| DC CHARACTERISTICS | | | | | |
| Collector – Base Cutoff Current, $I_E = 0\text{mA}$, $V_{CE} = 200\text{V}$ | I_{CBO} | – | – | 10 | nA |
| Emitter – Base Cutoff Current, $I_C = 0\text{mA}$, $V_{EB} = 5\text{V}$ | I_{EBO} | – | – | 50 | nA |
| Collector – Base Breakdown Voltage, $I_C = 10\mu\text{A}$, $I_E = 0\text{mA}$ | $V_{(BR)CBO}$ | 300 | – | – | V |
| Collector – Emitter Breakdown Voltage, $I_C = 1\text{mA}$, $I_B = 0\text{mA}$ | $V_{(BR)CEO}$ | 300 | – | – | V |
| Emitter – Base Breakdown Voltage, $I_E = 100\mu\text{A}$, $I_C = 0\text{mA}$ | $V_{(BR)CEO}$ | 5 | – | – | V |
| DC Current Gain, $I_C = 25\text{mA}$, $V_{CE} = 20\text{V}$ | h_{FE} | 50 | – | – | – |

AC CHARACTERISTICS

| | | | | | |
|---|---------------|-----------|---|------------|-----|
| Collector – Emitter Saturation Voltage, $I_C = 30\text{mA}$, $I_B = 5\text{mA}$ | $V_{CE(sat)}$ | – | – | 0.6 | V |
| Base – Emitter Saturation Voltage, $I_C = 20\text{mA}$, $I_B = 2\text{mA}$ | $V_{BE(sat)}$ | – | – | 0.9 | V |
| Collector – Base Capacitance, $I_E = 0\text{mA}$, $V_{CE} = 30\text{V}$, $f = 1\text{MHz}$ | C_{OB} | – | – | 1.6 | pF |
| Current Gain – Bandwidth Product, $I_C = 10\text{mA}$, $V_{CE} = 10\text{V}$ | f_T | 60 | – | – | MHz |

PACKAGE DIMENSIONS of BF620 in mm



PLASTIC CASE KT-47