

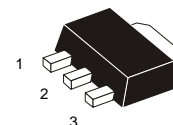
## The Small-signal NPN Silicon High Voltage Medium-Power Transistor

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

### 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

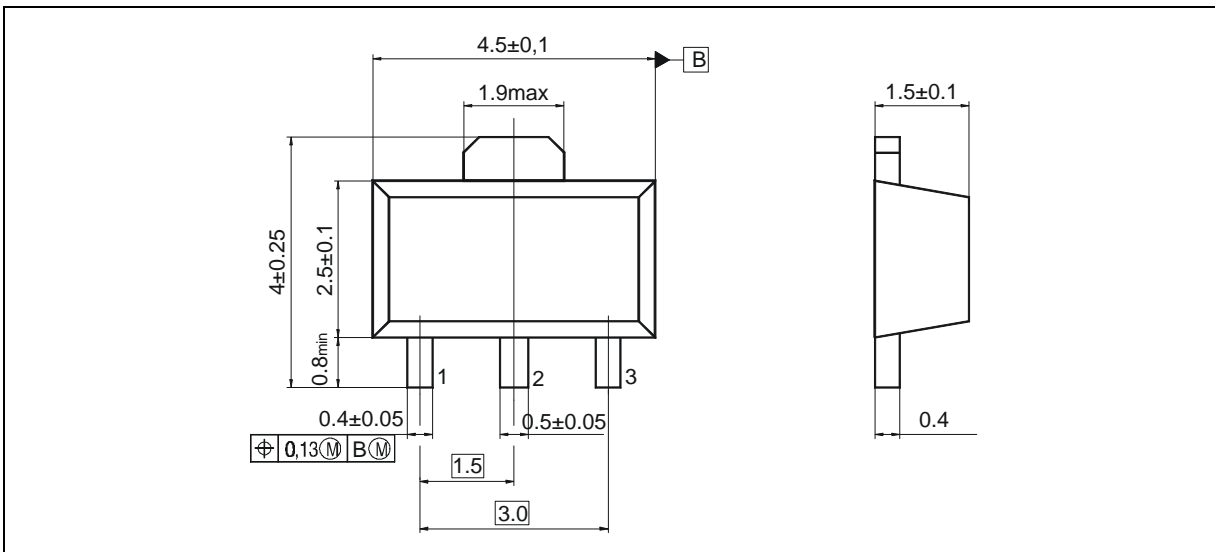
## ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

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

## AC CHARACTERISTICS

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

## PACKAGE DIMENSIONS of BF620 in mm



PLASTIC CASE KT-47