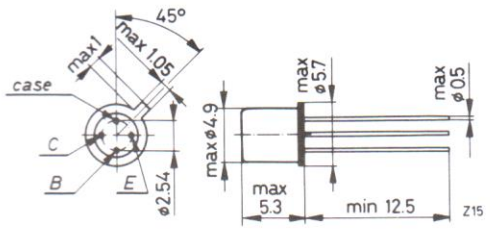
BF 200

NPN Silicon Planar Epitaxial Transistor

intended for use in VHF controlled amplifier stages of TV receivers.

Dimensions in mm



Case: TO-72

Mass: approx. 0.4 g

Absolute maximum ratings

Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	3	V
Collector current	I_C	20	mA
Total power dissipation			
$T_{amb} \leq 25°C$	P_{tot}	150	mW
$T_{case} \leq 25°C$	P_{tot}	375	mW
Junction temperature	T_j	175	°C
Storage temperature	T_s	−65 . . . + 175	°C

Thermal resistance

junction to ambient	R_{thja}	= 1000	K/W
junction to case	R_{thjc}	= 400	K/W

Static characteristics[1]

T_{amb} = 25°C

Collector-base cut-off current V_{CB} = 10 V	I_{CBO}	1	nA
Collector-base breakdown voltage I_C = 10 µA	$V_{(BR)CBO}$	≥30	V
Collector-emitter breakdown voltage I_C = 2 mA	$V_{(BR)CEO}$	≥20	V
Emitter-base breakdown voltage I_E = 10 µA	$V_{(BR)EBO}$	≥3	V
Base-emitter voltage V_{CB} = 10 V, $-I_E$ = 2 mA	V_{BE}	0.8	V
DC forward current transfer ratio			
V_{CE} = 10 V, I_C = 2 mA	h_{21E}	≥15	
V_{CE} = 7 V, I_C = 12 mA	h_{21E}	≥6	

[1] measured under pulsed conditions

Dynamic characteristics

T_{amb} = 25°C

Transition frequency V_{CE} = 10 V, I_C = 2 mA, f = 100 MHz	f_T	500	MHz
Reverse transfer capacitance V_{CE} = 10 V, I_C = 2 mA, f = 1 MHz	$-C_{12e}$	0.3 (≤0.5)	pF
Noise figure V_{CE} = 10 V, I_C = 2 mA, R_G = 100 Ω, f = 200 MHz	F	2.5 (≤5)	dB
Maximum power gain V_{CE} = 10 V, I_C = 2 mA, f = 200 MHz	$G_{pe\ max}$	22	dB
Control range of the power gain V_{CE} = 10 V, I_C = 2 mA, f = 200 MHz	ΔG_{pe}	45	dB

Permissible total power dissipation versus ambient and case temperature
P_{tot} = f (T_{amb}); P_{tot} = f (T_{case})
R_{th} = parameter