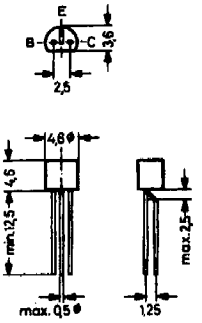
New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

BF240, BF241

NPN Silicon Epitaxial Planar Transistors
designed for emitter-grounded AM and FM amplifier stages



Plastic case ≈ JEDEC TO-92
TO-18 compatible
The case is impervious to light

Weight approximately 0.18 g
Dimensions in mm

Absolute Maximum Ratings

	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	40	V
Emitter Base Voltage	V_{EBO}	4	V
Collector Current	I_C	25	mA
Base Current	I_B	2	mA
Power Dissipation at T_{amb} = 25 °C	P_{tot}	300[1)]	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	−55 . . . +150	°C

[1)] Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

Characteristics at T_{amb} = 25 °C

		Symbol	Min.	Typ.	Max.	Value
DC Current Gain at V_{CE} = 10 V, I_C = 1 mA	**BF240** **BF241**	h_{FE} h_{FE}	67 36	– –	220 125	– –
Base Emitter Voltage at V_{CB} = 10 V, I_C = 1 mA		V_{BE}	650	700	740	mV
Collector Cutoff Current at V_{CB} = 20 V		I_{CBO}	–	–	100	nA
Thermal Resistance Junction to Ambient		R_{thA}	–	–	420[1]	K/W
Collector Base Breakdown Voltage at I_C = 10 μA		$V_{(BR)CBO}$	40	–	–	V
Collector Emitter Breakdown Voltage at I_C = 2 mA		$V_{(BR)CEO}$	40	–	–	V
Emitter Base Breakdown Voltage at I_E = 10 μA		$V_{(BR)EBO}$	4	–	–	V
Gain Bandwidth Product at V_{CB} = 10 V, I_C = 1 mA, f = 100 MHz	**BF240** **BF241**	f_T f_T	– –	430 400	– –	MHz MHz
Feedback Capacitance at V_{CB} = 10 V, I_C = 1 mA, f = 1 MHz		$-C_{re}$	–	0.27	–	pF
Noise Figure (emitter grounded) at V_{CB} = 10 V, I_C = 1 mA g_s = 5 mS, f = 200 kHz y_s = (6.6 – j 3.3) mS, f = 100 MHz		 F F	 – –	 1.5 1.6	 3.5 –	 dB dB
Output Admittance at V_{CB} = 10 V, I_C = 1 mA, f = 10.7 MHz at V_{CB} = 10 V, I_C = 1 mA, f = 470 kHz		 g_{oe} g_{oe}	 – –	 – –	 10.5 8.3	 μS μS

[1] Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case