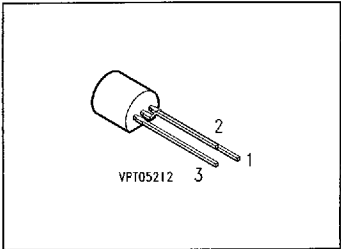


NPN Silicon RF Transistors

BF 240
BF 241

- For AM and FM stages
- Low feedback capacitance due to shield diffusion
- Low output conductance



Type	Marking	Ordering Code	Pin Configuration			Package ¹⁾
			1	2	3	
BF 240 BF 241	—	Q62702-F302 Q62702-F1241	C	E	B	TO-92

Maximum Ratings

Parameter	Symbol	Values	Unit
Collector-emitter voltage	V_{CE0}	40	V
Collector-base voltage	V_{CB0}	40	
Emitter-base voltage	V_{EB0}	4	
Collector current	I_C	25	mA
Base current	I_B	2	
Total power dissipation, $T_A \leq 45\text{ }^{\circ}\text{C}$	P_{tot}	250	mW
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	- 55 ... + 150	

Thermal Resistance

Junction - ambient	R_{thJA}	≤ 420	K/W
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¹⁾ For detailed information see chapter Package Outlines.

Electrical Characteristics

at $T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

Collector-base breakdown voltage $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)\text{ }CB0}$	40	—	—	V
Emitter-base breakdown voltage $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)\text{ }EB0}$	4	—	—	
Collector cutoff current $V_{CB} = 20\text{ V}$	I_{CB0}	—	—	100	nA
Base-emitter voltage $I_C = 1\text{ mA}$, $V_{CE} = 10\text{ V}$	V_{BE}	—	700	—	mV
DC current gain $I_C = 1\text{ mA}$, $V_{CE} = 10\text{ V}$ BF 240 BF 241	h_{FE}	65 35	— —	220 125	—

AC Characteristics

Transition frequency $I_C = 1\text{ mA}$, $V_{CE} = 10\text{ V}$	f_T	—	400	—	MHz
Collector-base capacitance $V_{CE} = 10\text{ V}$, $V_{BE} = 0\text{ V}$, $f = 1\text{ MHz}$	C_{cb}	—	0.3	—	pF
Noise figure $I_C = 1\text{ mA}$, $V_{CE} = 10\text{ V}$, $f = 100\text{ kHz}$ $R_S = 300\text{ }\Omega$	F	—	1.7	—	dB
Output conductance $I_C = 1\text{ mA}$, $V_{CE} = 10\text{ V}$, $f = 10.7\text{ MHz}$ 0.5 MHz	g_{22o}	— —	— —	10.5 8.3	μS

Total power dissipation $P_{\text{tot}} = f(T_A)$

