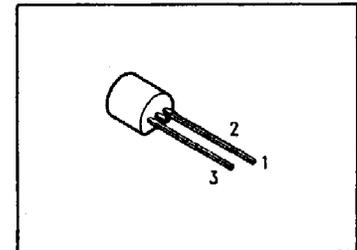


**BF 254B**

**Maximum Ratings**

Parameter	Symbol	Values	Unit
Collector-emitter voltage	$V_{CE0}$	20	V
Collector-base voltage	$V_{CB0}$	30	
Emitter-base voltage	$V_{EB0}$	5	
Collector current	$I_C$	30	mA
Total power dissipation, $T_A \leq 45^\circ\text{C}$	$P_{tot}$	250	mW
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-65 ... +150	



Pin Configuration			Package
1	2	3	
C	E	B	TO-92

**Thermal Resistance**

Junction - ambient	$R_{thJA}$	$\leq 420$	K/W
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**Electrical Characteristics**  
at  $T_A = 25^\circ\text{C}$ , unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**DC Characteristics**

DC current gain $I_C = 1\text{ mA}, V_{CE} = 10\text{ V}$ BF 254B	$h_{FE}$	110	-	220	-
Base-emitter voltage $I_C = 1\text{ mA}, V_{CE} = 10\text{ V}$	$V_{BE}$	-	0.68	-	V

**AC Characteristics**

Transition frequency $I_C = 1\text{ mA}, V_{CE} = 10\text{ V}, f = 100\text{ MHz}$ BF 254	$f_t$	-	260	-	MHz
Collector-base capacitance $V_{CE} = 10\text{ V}, V_{BE} = 0\text{ V}, f = 1\text{ MHz}$	$C_{cb}$	-	0.6	-	pF
Collector-emitter capacitance $V_{CE} = 10\text{ V}, V_{BE} = 0\text{ V}, f = 1\text{ MHz}$	$C_{ce}$	-	0.6	-	
Noise figure $I_C = 1\text{ mA}, V_{CE} = 10\text{ V}$ $f = 1\text{ MHz}, g_s = 1.5\text{ mS}^{(1)}$ $f = 100\text{ MHz}, g_s = 10\text{ mS}^{(1)}$	$F$	-	1.2	-	dB
		-	3.8	-	

**Y parameters, typical values,  $I_C = 10\text{ V}$**

$f$ MHz		$g_{11}$ mS	$b_{11}$ mS	$ y_{12} $ $\mu\text{S}$	$\phi_{12}$ deg.	$ y_{21} $ mS	$\phi_{21}$ deg.	$g_{22}$ $\mu\text{S}$	$b_{22}$ $\mu\text{S}$
Common emitter									
0.45	BF 254	0.3	0.06	1.7	-90	38	0	3.2	3.4
10.7	BF 254	0.4	1.5	41	-90	37	-10	4	8.1

<sup>1)</sup>  $g_s$  = generator conductance

