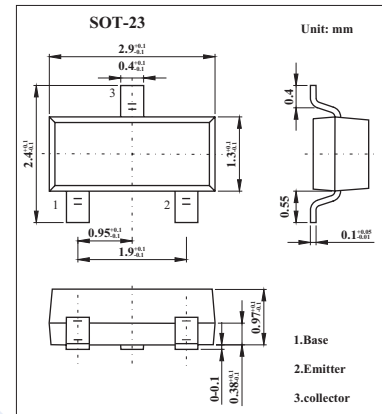


## NPN Medium Frequency Transistor

### KFS20(BFS20)

#### ■ Features

- Low current (max. 25 mA)
- Low voltage (max. 20 V)
- Very low feedback capacitance (typ. 350 fF).



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	30	V
Collector-emitter voltage	$V_{CE0}$	20	V
Emitter-base voltage	$V_{EB0}$	4	V
Collector current	$I_C$	25	mA
Peak collector current	$I_{CM}$	25	mA
power dissipation	$P_D$	250	mW
Thermal resistance from junction to ambient *	$R_{th\ j-a}$	500	K/W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$

\* Transistor mounted on an FR4 printed-circuit board.

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$I_E = 0; V_{CB} = 20\text{ V}$			100	nA
	$I_{CBO}$	$I_E = 0; V_{CB} = 20\text{ V}; T_j = 100\text{ }^\circ\text{C}$			10	$\mu\text{ A}$
Emitter cutoff current	$I_{EBO}$	$I_C = 0; V_{EB} = 4\text{ V}$			100	nA
DC current gain	$h_{FE}$	$I_C = 7\text{ mA}; V_{CE} = 10\text{ V}$	40	85		
Base to emitter voltage	$V_{BE}$	$I_C = 7\text{ mA}; V_{CE} = 10\text{ V}$		740	900	mV
Collector capacitance	$C_C$	$I_E = I_C = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$		1		pF
Freedback capacitance	$C_{re}$	$I_C = 0, V_{CB} = 10\text{ V}, f = 1\text{ MHz}$		350		pF
Transition frequency	$f_T$	$I_C = 5\text{ mA}; V_{CE} = 10\text{ V}; f = 100\text{ MHz}$	275	450		MHz

#### ■ Marking

Marking	G1
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