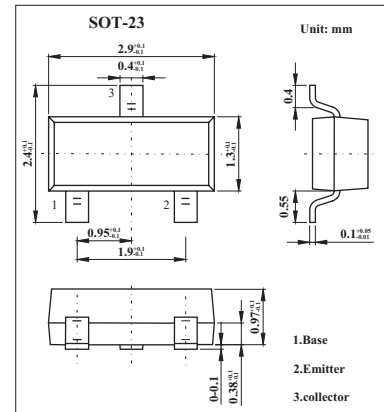


■ Features

- Low noise and high gain.
 $NF = 1.1 \text{ dB Typ.}, G_a = 11 \text{ dB Typ. @} V_{CE} = 10 \text{ V}, I_c = 7 \text{ mA}, f = 1.0 \text{ GHz}$
- High power gain.
 $MAG = 13 \text{ dB Typ. @} V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}, f = 1.0 \text{ GHz}$



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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CB0}	20	V
Collector to emitter voltage	V_{CEO}	12	V
Emitter to base voltage	V_{EB0}	3.0	V
Collector current (DC)	I_c	100	mA
Total power dissipation	P_{tot}	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CB0}	$V_{CB} = 10 \text{ V}, I_E = 0 \text{ mA}$			1.0	μA
Emitter cutoff current	I_{EB0}	$V_{EB} = 1.0 \text{ V}, I_c = 0 \text{ mA}$			1.0	μA
DC current gain *	h_{FE}	$V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}$	50	120	250	
Insertion power gain	$ S_{21e} ^2$	$V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}, f = 1 \text{ GHz}$		11.5		dB
Noise figure	NF	$V_{CE} = 10 \text{ V}, I_c = 7 \text{ mA}, f = 1 \text{ GHz}$		1.1	2.0	dB
Reverse transfer capacitance	C_{re}	$V_{CB} = 10 \text{ V}, I_E = 0 \text{ mA}, f = 1 \text{ MHz}$		0.55	1.0	pF
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}$		7		GHz

*. Pulse measurement: $PW \leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$.

■ hFE Classification

Marking	R23	R24	R25
Rank	Q	R	S
hFE	50~100	80~160	125~250