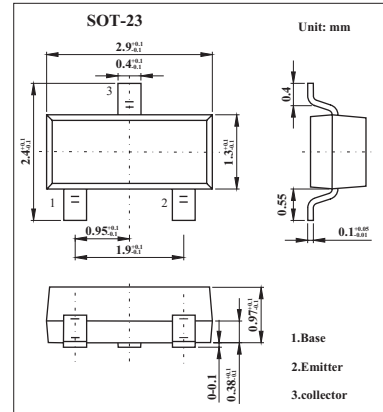


■ Features

- Low noise and high gain.  
NF = 1.1 dB Typ., Ga = 11 dB Typ. @V<sub>CE</sub> = 10 V, I<sub>c</sub> = 7 mA, f = 1.0 GHz
- High power gain.  
MAG = 13 dB Typ. @V<sub>CE</sub> = 10 V, I<sub>c</sub> = 20 mA, f = 1.0 GHz



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector to base voltage	V <sub>CB0</sub>	20	V
Collector to emitter voltage	V <sub>CEO</sub>	12	V
Emitter to base voltage	V <sub>EB0</sub>	3.0	V
Collector current (DC)	I <sub>c</sub>	100	mA
Total power dissipation	P <sub>tot</sub>	200	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-65 to +150	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0 mA			1.0	μ A
Emitter cutoff current	I <sub>EB0</sub>	V <sub>EB</sub> = 1.0 V, I <sub>c</sub> = 0 mA			1.0	μ A
DC current gain *	h <sub>FE</sub>	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 20 mA	50	120	250	
Insertion power gain	S <sub>21e</sub>   <sup>2</sup>	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 20 mA, f = 1 GHz		11.5		dB
Noise figure	NF	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 7 mA, f = 1 GHz		1.1	2.0	dB
Reverse transfer capacitance	C <sub>re</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0 mA, f = 1 MHz		0.55	1.0	pF
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 20 mA		7		GHz

\*. Pulse measurement: PW ≤ 350 μ s, Duty Cycle ≤ 2%.

■ hFE Classification

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