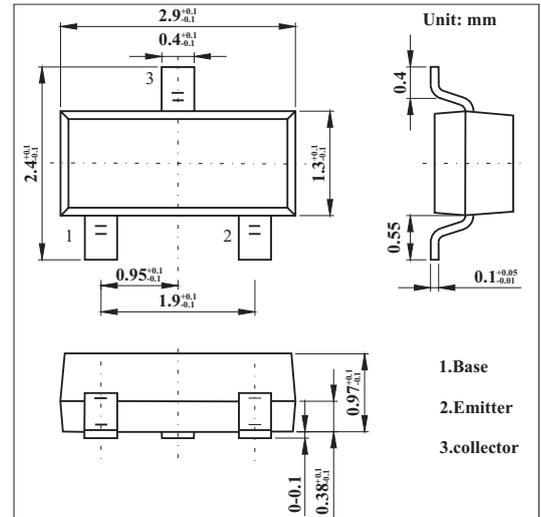


**SOT-23 Plastic-Encapsulate Transistors**
**Features**

- Low noise and high gain.
- NF = 1.3 dB Typ., Ga =11dB Typ. @VCE =10V, IC =7mA,f=1.0GHz High power gain.
- MAG=12dB Typ. @VCE =10V, IC =20mA, f = 1.0GHz
- TRANSISTOR (NPN)

**MECHANICAL DATA**

- Case: SOT-23 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any


**MAXIMUM RATINGS AND CHARACTERISTICS**

@ 25°C Ambient Temperature (unless otherwise noted)

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>EBO</sub>	3	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>	- 6 5 to + 1 5 0	°C

**Electrical Specification (T<sub>A</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0 mA			1.0	μ A
Emitter cutoff current	I <sub>EBO</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> =20mA	50	120	250	
Insertion power gain	S <sub>21e</sub> <sup>2</sup>	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 2 0 m A , f = 1 G H z		11.5		dB
Noise figure	NF	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 7 m A , f = 1 G H z		1.2	2	dB
Reversetransercapacitance **	C <sub>re</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> =0mA,f=1MHz		0.55		pF
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> = 10 V, I <sub>c</sub> = 2 0 m A		7		GHz

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

\*\* The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

# RATINGS AND CHARACTERISTIC CURVES

