

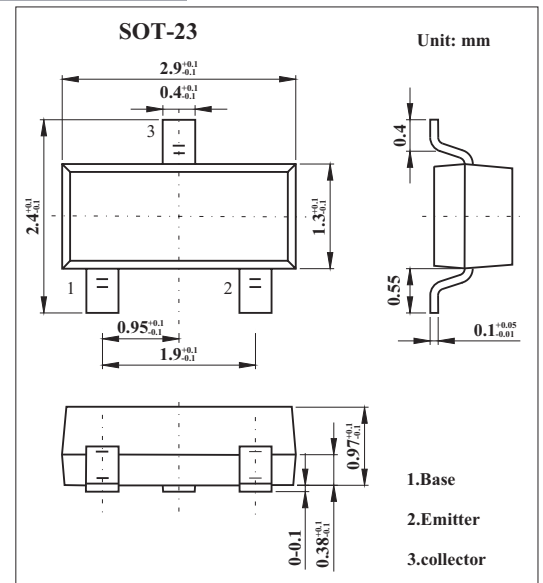
SOT-23 Plastic-Encapsulate Transistors

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 _{CBO}	20	V
Collector to emitter voltage	V _{CEO}	12	V
Emitter to base voltage	V _{EBO}	3	V
Collector current (DC)	I _C	100	mA
Total power dissipation	P _{tot}	200	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-65 to +150	°C

Electrical Specification (T_A=25°C unless otherwise specified)

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I _{CBO}	V _{CB} = 10 V, I _E = 0 mA			1.0	μ A
Emitter cutoff current	I _{EBO}	V _{EB} = 1.0 V, I _C = 0 mA			1.0	μ A
DC current gain *	h _{FE}	V _{CE} = 10 V, I _C =20mA	50	120	250	
Insertion power gain	S _{21e} ²	V _{CE} = 10 V, I _C = 2.0 mA, f = 1 GHz		11.5		dB
Noise figure	NF	V _{CE} = 10 V, I _C = 7 mA, f = 1 GHz		1.2	2	dB
Reversetransfercapacitance **	C _{re}	V _{CB} = 10 V, I _E =0mA,f=1MHz		0.55		pF
Transition frequency	f _t	V _{CE} = 10 V, I _C = 2.0 mA		7		GHz

* Pulse measurement: PW ≤ 350 μs, Duty Cycle ≤ 2%.

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

hFE Classification

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

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

