

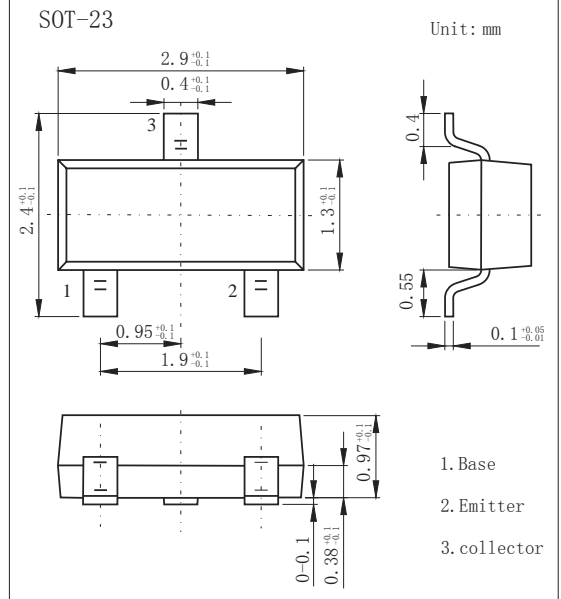
## SOT-23 Plastic-Encapsulate Transistors

### Features

- Collector current up to 150mA
- High hFE linearity
- Complementary to 2SA733
- NPN Transistors

### MECHANICAL DATA

- Case style: SOT-23 molded plastic
- 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>	60	V
Collector to emitter voltage	V <sub>CEO</sub>	50	V
Emitter to base voltage	V <sub>EBO</sub>	5	V
Collector current (DC)	I <sub>C</sub>	150	mA
Power dissipation	P <sub>C</sub>	200	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55 to +150	°C

### PACKAGE INFORMATION

Device	Package	Shipping
2SC945	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100 μA, I <sub>E</sub> =0	60			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	50			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100 μA, I <sub>C</sub> =0	5			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 60V, I <sub>E</sub> = 0			0.1	μA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 5.0 V, I <sub>C</sub> = 0			0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 6.0V, I <sub>C</sub> = 1.0mA	130		400	
		V <sub>CE</sub> = 6.0V, I <sub>C</sub> = 0.1mA	40			
Collector saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			0.3	V
Base saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			1.0	V
Collector to base capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz			3.0	pF
Noise figure	NF	V <sub>CE</sub> =6V, I <sub>C</sub> =0.1mA, R <sub>g</sub> =10kΩ, f=1kHz		4	10	dB
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> =10mA, f = 30 MHz	150			MHz

### Classification of h<sub>FE</sub>(1)

Type	2SC945-L	2SC945-H
Range	130-200	200-400
Marking	CRL	CR

# RATINGS AND CHARACTERISTIC CURVES

## Typical Characteristics

