

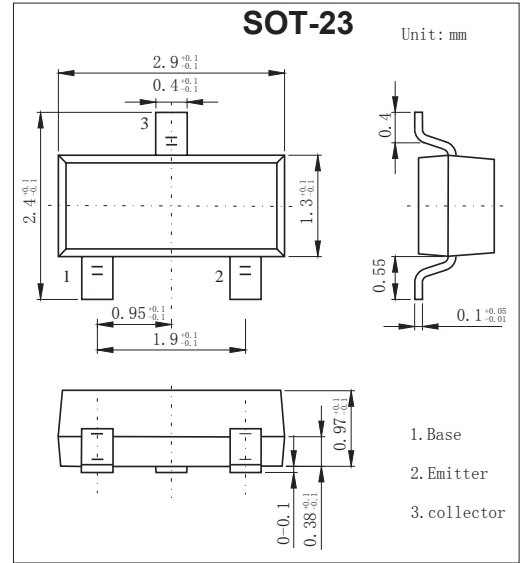
## SOT-23 Plastic-Encapsulate Transistors

### Features

- High hFE
- Low VCE(sat)
- For general amplification
- Complimentary to 2SB709A
- NPN Transistors

### MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	60	V
Collector - Emitter Voltage	V <sub>CE0</sub>	50	
Emitter - Base Voltage	V <sub>EB0</sub>	7	
Collector Current - Continuous	I <sub>c</sub>	100	mA
Collector Power Dissipation	P <sub>c</sub>	200	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	625	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

### PACKAGE INFORMATION

Device	Package	Shipping
2SD601A	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = 100 μA, I <sub>E</sub> = 0	60			V
Collector- emitter breakdown voltage	V <sub>CE0</sub>	I <sub>c</sub> = 2 mA, I <sub>B</sub> = 0	50			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>c</sub> = 0	7			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0			0.1	μA
Collector-emitter cut-off current	I <sub>CE0</sub>	V <sub>CE</sub> = 30 V, I <sub>B</sub> = 0			100	
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 5V, I <sub>c</sub> =0			0.1	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =100 mA, I <sub>B</sub> =10mA			0.3	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =100 mA, I <sub>B</sub> =10mA			1.2	
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 2V, I <sub>c</sub> = 100mA	90			
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 10V, I <sub>c</sub> = 2mA	160		460	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> =0,f=1MHz		3.5		pF
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> = 10V, I <sub>c</sub> = 2mA,f=200MHz		150		MHz

### Classification of h<sub>FE(2)</sub>

Type	2SD601A-Q	2SD601A-R	2SD601A-S
Range	160-260	210-340	290-460
Marking	ZQ	ZR	ZS