

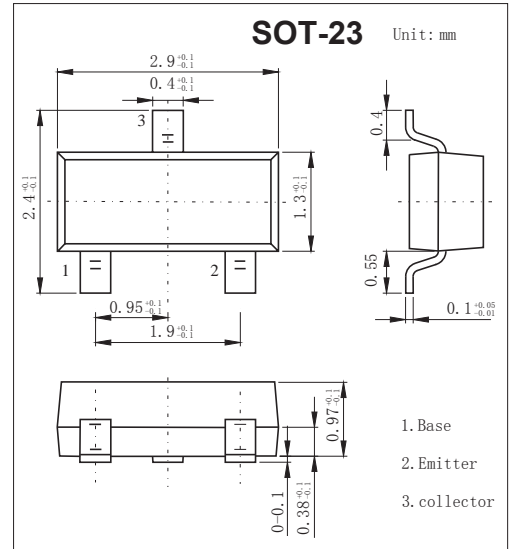
## SOT-23 Plastic-Encapsulate Transistors

### Features

- High DC Current gain.
- Complimentary to 2SB624

### 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 - Base Voltage	V <sub>CB0</sub>	30	V
Collector - Emitter Voltage	V <sub>CE0</sub>	25	
Emitter - Base Voltage	V <sub>EB0</sub>	5	
Collector Current - Continuous	I <sub>c</sub>	700	mA
Collector 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	

### PACKAGE INFORMATION

Device	Package Code	Shipping
2SD596	SOD-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	30			V
Collector- emitter breakdown voltage	V <sub>CE0</sub>	I <sub>c</sub> = 1 mA, I <sub>b</sub> = 0	25			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>c</sub> = 0	5			
Collector-base cut-off current	I <sub>cBO</sub>	V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0			100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>c</sub> = 0			100	
Collector-emitter saturation voltage (Note.1)	V <sub>CE(sat)</sub>	I <sub>c</sub> =700 mA, I <sub>b</sub> =70mA			0.6	V
Base - emitter saturation voltage (Note.1)	V <sub>BE(sat)</sub>	I <sub>c</sub> =700 mA, I <sub>b</sub> =70mA			1.2	
Base - emitter voltage (Note.1)	V <sub>BE</sub>	V <sub>CE</sub> = 6V, I <sub>c</sub> = 10mA	0.6		0.7	
DC current gain (Note.1)	h <sub>FE(1)</sub>	V <sub>CE</sub> = 1V, I <sub>c</sub> = 100mA	110		400	
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 1V, I <sub>c</sub> = 700mA	50			
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 6V, I <sub>E</sub> = 10mA, f=10MHz		12		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 6V, I <sub>c</sub> = 10mA	170			MHz

Note.1: Pulse test : Pulse width ≤350μs, Duty Cycle ≤2%.

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

Type	2SD596-DV1	2SD596-DV2	2SD596-DV3	2SD596-DV4	2SD596-DV5
Range	110-180	135-220	170-270	200-320	250-400
Marking	DV1	DV2	DV3	DV4	DV5

# RATINGS AND CHARACTERISTIC CURVES

## Typical Characteristics

