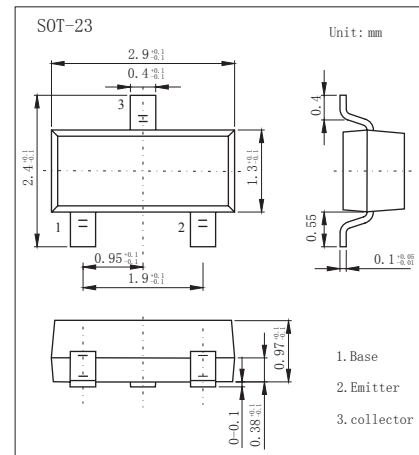


**NPN Transistors**

**2SD596**

■ Features

- High DC Current gain.
- Complimentary to 2SB624



■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	30	V
Collector - Emitter Voltage	$V_{CE0}$	25	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_C$	700	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}, I_E = 0$	30			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{mA}, I_B = 0$	25			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 30 \text{V}, I_E = 0$			100	nA
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 5 \text{V}, I_C = 0$			100	
Collector-emitter saturation voltage (Note.1)	$V_{CE(sat)}$	$I_C = 700 \text{mA}, I_B = 70 \text{mA}$			0.6	V
Base - emitter saturation voltage (Note.1)	$V_{BE(sat)}$	$I_C = 700 \text{mA}, I_B = 70 \text{mA}$			1.2	
Base - emitter voltage (Note.1)	$V_{BE}$	$V_{CE} = 6 \text{V}, I_C = 10 \text{mA}$	0.6		0.7	
DC current gain (Note.1)	$h_{FE(1)}$	$V_{CE} = 1 \text{V}, I_C = 100 \text{mA}$	110		400	
	$h_{FE(2)}$	$V_{CE} = 1 \text{V}, I_C = 700 \text{mA}$	50			
Collector output capacitance	$C_{ob}$	$V_{CB} = 6 \text{V}, I_E = 10 \text{mA}, f = 10 \text{MHz}$		12		pF
Transition frequency	$f_T$	$V_{CE} = 6 \text{V}, I_C = 10 \text{mA}$	170			MHz

Note.1: Pulse test : Pulse width  $\leq 350 \mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

■ Classification of  $h_{fe(1)}$

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



炬芯微  
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SMD Type

Transistors

## NPN Transistors

### 2SD596

#### Typical Characteristics

