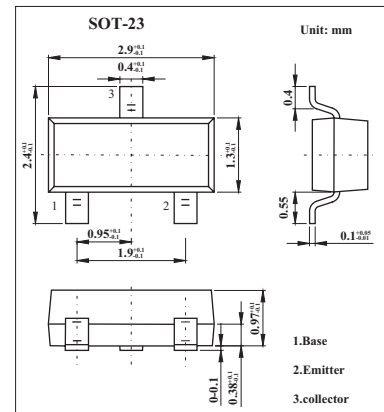


## NPN Silicon Epitaxial Transistor

### 2SD596

#### ■ Features

- Micro package.
- High dc current gain.  $h_{FE}$ :200TYP. ( $V_{CE}=1V$ ,  $I_C=100mA$ )



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	25	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current (DC)	$I_C$	700	mA
Total power dissipation	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature range	$T_{stg}$	-55 to +150	$^\circ C$

#### ■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 30 V, I_E = 0$			100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5.0 V, I_C = 0$			100	nA
DC current gain *	$h_{FE}$	$V_{CE} = 1.0 V, I_C = 100 mA$	110	200	400	
Base to emitter voltage *	$V_{BE}$	$V_{CE} = 6.0 V, I_C = 10 mA$	600	640	700	mV
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = 700 mA, I_B = 70 mA$		0.22	0.6	V
Output capacitance	$C_{ob}$	$V_{CB} = 6.0 V, I_E = 0, f = 10 MHz$		12		pF
Gain bandwidth product	$f_T$	$V_{CE} = 6.0 V, I_E = -10 mA$		170		MHz

\* Pulsed:  $PW \leq 350 \mu s$ , duty cycle  $\leq 2\%$

#### ■ $h_{FE}$ Classification

Marking	DV				
Rank	1	2	3	4	5
$h_{FE}$	110~180	135~220	170~270	200~320	250~400