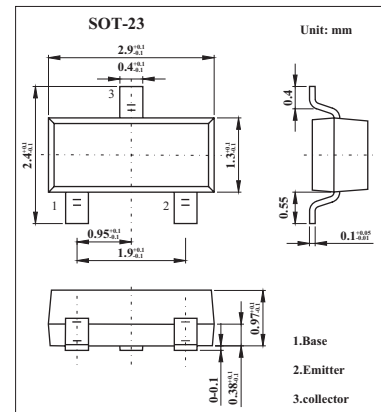


## NPN Silicon Epitaxia

## 2SD2230

## ■ Features

- High hFE and high current.
- Low  $V_{CE(sat)}$ .

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	16	V
Collector-emitter voltage	$V_{CE0}$	16	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current(dc)	$I_D$	500	mA
Total power dissipation	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 16\text{ V}, I_E = 0$			100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 6.0\text{ V}, I_C = 0$			100	nA
DC current gain *	hFE 1	$V_{CE} = 1.0\text{ V}, I_C = 100\text{ mA}$	200			
	hFE 2	$V_{CE} = 1.0\text{ V}, I_C = 500\text{ mA}$	200			
Base to emitter voltage *	$V_{BE}$	$V_{CE} = 1.0\text{ V}, I_C = 10\text{ mA}$	550		700	mV
Collector saturation voltage	$V_{CE(sat)1}$	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$		33	50	mV
	$V_{CE(sat)2}$	$I_C = 500\text{ mA}, I_B = 20\text{ mA}$		150	200	mV
Output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$			15	pF
Gain bandwidth product	$f_T$	$V_{CE} = 1.0\text{ V}, I_E = -100\text{ mA}$	50			MHz

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

## ■ Marking

Marking	D46
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