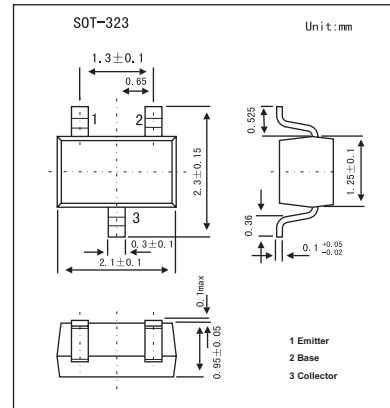


# 2SD2228

### ■ Features

- High dc current.
- Low collector saturation voltage.



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	25	V
Collector-emitter voltage	V <sub>CEO</sub>	16	V
Emitter-base voltage	V <sub>EBO</sub>	6	V
Collector current	I <sub>c</sub>	500	mA
Total power dissipation	P <sub>T</sub>	150	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I <sub>cBO</sub>	V <sub>CB</sub> = 16 V, I <sub>E</sub> = 0			100	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 6.0 V, I <sub>C</sub> = 0			100	nA
DC current gain *	h <sub>FE</sub>	V <sub>CE</sub> = 1.0 V, I <sub>c</sub> = 100 mA	100	200	600	
Collector saturation voltage *	V <sub>CE(sat)1</sub>	I <sub>c</sub> = 100 mA, I <sub>B</sub> = 10 mA		45	100	mV
	V <sub>CE(sat)2</sub>	I <sub>c</sub> = 500 mA, I <sub>B</sub> = 20 mA		200	300	mV
Base to emitter voltage *	V <sub>BE</sub>	V <sub>CE</sub> = 1.0 V, I <sub>c</sub> = 10 mA	600	650	700	mV
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = 3.0 V, I <sub>E</sub> = -100 mA	50			MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1.0 MHz			15	pF

\* Pulsed: PW ≤ 350 μs, duty cycle ≤ 2%

### ■ hFE Classification

Marking	D42	D43	D44	D45
hFE	110~240	190~320	270~400	350~600