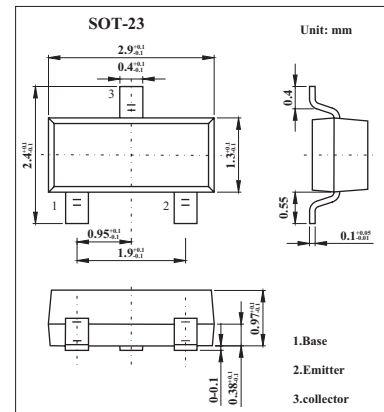


## Silicon NPN Epitaxial

## 2SC5232

## ■ Features

- Low saturation voltage:  $V_{CE(sat)}(1) = 15 \text{ mV (typ.)}$   
@ $I_C = 10 \text{ mA}/I_B = 0.5 \text{ mA}$
- Large collector current:  $I_C = 500 \text{ mA (max.)}$ .

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	15	V
Collector-emitter voltage	$V_{CEO}$	12	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	500	mA
Base current	$I_B$	50	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

## 2SC5232

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	ICBO	V <sub>CB</sub> = 15 V, I <sub>E</sub> = 0			0.1	μA	
Emitter cut-off current	IEBO	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0			0.1	μA	
DC current gain	hFE	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 10 mA	300		1000		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0.5 mA		15	30	V	
		I <sub>C</sub> = 200 mA, I <sub>B</sub> = 10 mA		110	250		
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 200 mA, I <sub>B</sub> = 10 mA		0.87	1.2	V	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 10 mA	80	130		MHz	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz		4.2		pF	
Collector-emitter on resistance	R <sub>on</sub>	I <sub>B</sub> = 1 mA, V <sub>in</sub> = 1 V <sub>rms</sub> , f = 1 kHz		0.9		Ω	
Turn-on time	ton			85		ns	
Storage time	tstg				170		ns
Fall time	tf				40		ns

## ■ hFE Classification

Marking	F	
Rank	A	B
hFE	300~600	500~1000