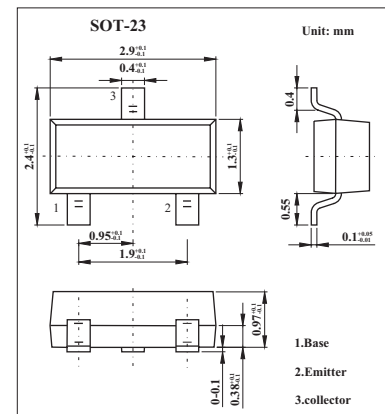


## Silicon PNP Epitaxial Planar Type

## 2SA1738

## ■ Features

- High-speed switch
- Low collector to emitter saturation voltage  $V_{CE(sat)}$ .
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	-15	V
Collector-emitter voltage	$V_{CEO}$	-15	V
Emitter-base voltage	$V_{EBO}$	-4	V
Collector current	$I_C$	-50	mA
Peak collector current	$I_{CP}$	-100	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

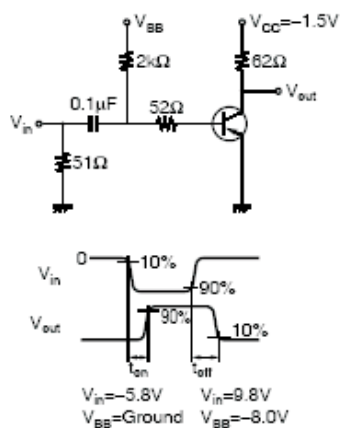
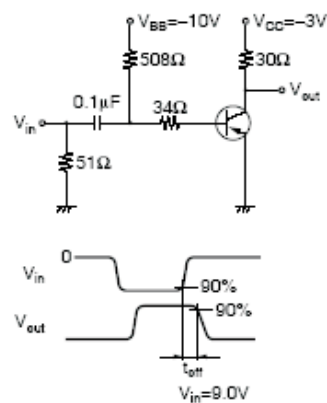
## 2SA1738

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	V <sub>CB</sub> = -8 V, I <sub>E</sub> = 0			-0.1	μA
Emitter cutoff current	IEBO	V <sub>CE</sub> = -3 V, I <sub>C</sub> = 0			-0.1	μA
Forward current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = -1 V, I <sub>C</sub> = -10 mA	50		150	
		V <sub>CE</sub> = -1 V, I <sub>C</sub> = -1 mA	30			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -10 mA, I <sub>B</sub> = -1 mA		-0.1	-0.2	V
Transition frequency	f <sub>T</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 10 mA, f = 200 MHz	800	1500		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -5 V, I <sub>E</sub> = 0, f = 1 MHz		1		pF
Turn-on time	t <sub>on</sub>	Note 1		12		ns
Turn-off time	t <sub>off</sub>			20		ns
Storage time	t <sub>stg</sub>			19		ns

Note 1:

## Switching time measurement circuit

t<sub>on</sub>, t<sub>off</sub> Test Circuitt<sub>stg</sub> Test Circuit■ h<sub>FE</sub> Classification

Marking	AK	
Rank	Q	R
h <sub>FE</sub>	50~120	90~150