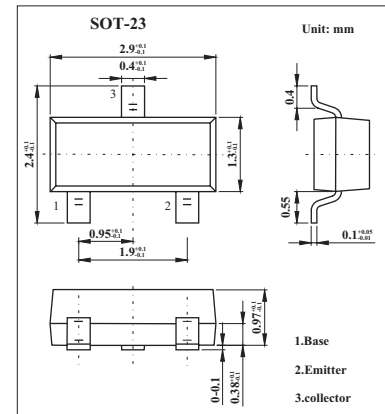


Silicon PNP Epitaxial Planar Type

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	$^\circ\text{C}$

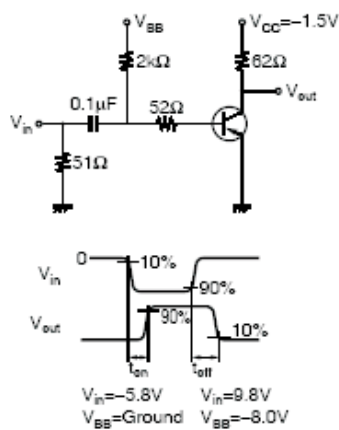
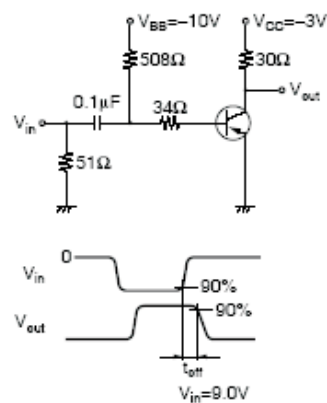
2SA1738

■ Electrical Characteristics Ta = 25°C

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

Note 1:

Switching time measurement circuit

t_{on}, t_{off} Test Circuitt_{stg} Test Circuit■ h_{FE} Classification

Marking	AK	
Rank	Q	R
h _{FE}	50~120	90~150