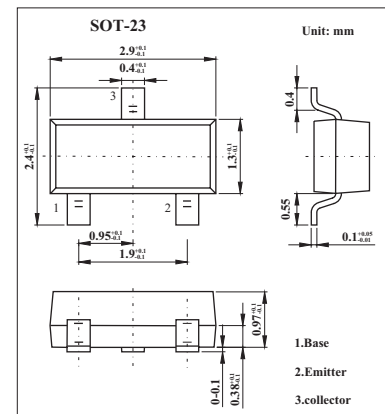


Silicon PNP Epitaxial Planar Type

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	$^\circ\text{C}$

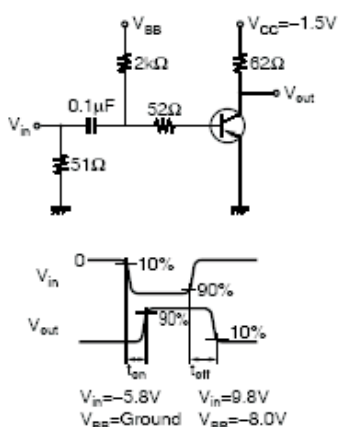
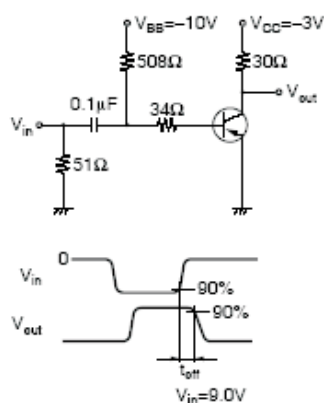
2SA1738

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -8\text{ V}, I_E = 0$			-0.1	μA
Emitter cutoff current	I_{EBO}	$V_{CE} = -3\text{ V}, I_C = 0$			-0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = -1\text{ V}, I_C = -10\text{ mA}$	50		150	
		$V_{CE} = -1\text{ V}, I_C = -1\text{ mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$		-0.1	-0.2	V
Transition frequency	f_T	$V_{CB} = -10\text{ V}, I_E = 10\text{ mA}, f = 200\text{ MHz}$	800	1500		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -5\text{ V}, I_E = 0, f = 1\text{ MHz}$		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 Circuit t_{stg} Test Circuit■ h_{FE} Classification

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