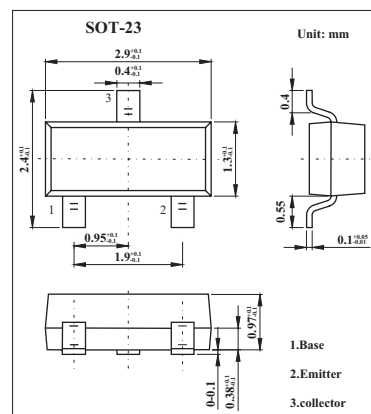


Silicon NPN Epitaxial

2SC5232

■ Features

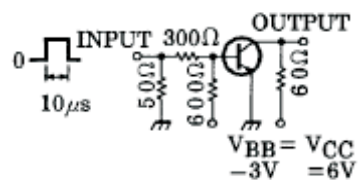
- Low saturation voltage: $V_{CE(sat)}(1) = 15 \text{ mV (typ.)}$
@ $I_C = 10 \text{ mA}/I_B = 0.5 \text{ mA}$
- Large collector current: $I_C = 500 \text{ mA (max.)}$

■ 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	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 15\text{ V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 2\text{ V}, I_C = 10\text{ mA}$	300		1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{ mA}, I_B = 0.5\text{ mA}$		15	30	V
		$I_C = 200\text{ mA}, I_B = 10\text{ mA}$		110	250	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 200\text{ mA}, I_B = 10\text{ mA}$		0.87	1.2	V
Transition frequency	f_T	$V_{CE} = 2\text{ V}, I_C = 10\text{ mA}$	80	130		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		4.2		pF
Collector-emitter on resistance	R_{on}	$I_B = 1\text{ mA}, V_{in} = 1\text{ V}_{rms}, f = 1\text{ kHz}$		0.9		Ω
Turn-on time	t_{on}	 <p>Duty cycle $\leq 2\%$, $I_{B1} = -I_{B2} = 5\text{ Ma}$</p>		85		ns
Storage time	t_{stg}			170		ns
Fall time	t_f			40		ns

■ h_{FE} Classification

Marking	F	
Rank	A	B
h_{FE}	300~600	500~1000