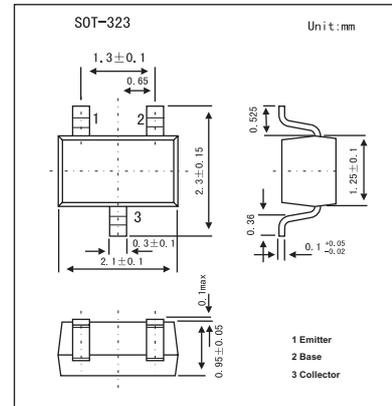


Silicon NPN Epitaxial

2SC4213

■ Features

- High emitter-base voltage: $V_{EBO} = 25\text{ V}$ (min).
- High reverse hFE: Reverse hFE = 150 (typ.) ($V_{CE} = -2\text{ V}$, $I_C = -4\text{ mA}$).
- Low on resistance: $R_{ON} = 1\ \Omega$ (typ.) ($I_B = 5\text{ mA}$).
- High DC current gain: hFE = 200~1200.
- Small package.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	25	V
Collector current	I_C	300	mA
Base current	I_B	60	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	I_{CBO}	$V_{CB} = 50\text{ V}$, $I_E = 0$			0.1	μA	
Emitter cut-off current	I_{EBO}	$V_{EB} = 25\text{ V}$, $I_C = 0$			0.1	μA	
DC current gain	hFE	$V_{CE} = 2\text{ V}$, $I_C = 4\text{ mA}$	200		1200		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 30\text{ mA}$, $I_B = 3\text{ mA}$		0.042	0.1	V	
Base-emitter voltage	V_{BE}	$V_{CE} = 2\text{ V}$, $I_C = 4\text{ mA}$		0.61		V	
Transition frequency	f_T	$V_{CE} = 6\text{ V}$, $I_C = 4\text{ mA}$		30		MHz	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		4.8	7	pF	
Turn-on time	t_{on}			160		ns	
Storage time	t_{stg}				500		ns
Fall time	t_f				130		ns

■ hFE Classification

Marking	AA	AB
hFE	200~700	350~1200