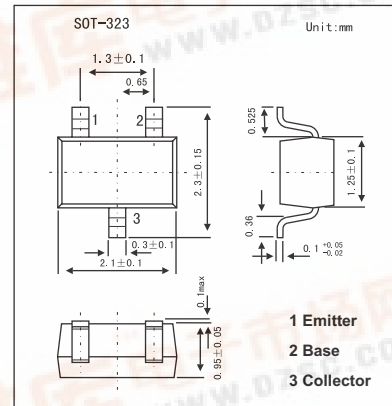


SMD Type Transistors

Silicon NPN Epitaxial Planar Type  
2SD1821A

Features

- High collector-emitter voltage  $V_{CE0}$
- Low noise voltage NV



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	185	V
Collector-emitter voltage	$V_{CE0}$	185	V
Emitter-base voltage	$V_{EB0}$	5	V
Peak collector current	$I_{CP}$	100	A
Collector current	$I_C$	50	A
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-emitter voltage	$V_{CE0}$	$I_C = 100 \mu\text{A}, I_B = 0$	185			V
Emitter-base voltage	$V_{EB0}$	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Collector-base cutoff current	$I_{CB0}$	$V_{CB} = 100 \text{V}, I_E = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 5 \text{V}, I_C = 10 \text{mA}$	130		330	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 30 \text{mA}, I_B = 3 \text{mA}$				V
Transition frequency	$f_T$	$V_{CB} = 10 \text{V}, I_E = -10 \text{mA}, f = 200 \text{MHz}$		150		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{V}, I_E = 0, f = 1 \text{MHz}$		2.3		pF
Noise voltage	NV	$V_{CE} = 10 \text{V}, I_C = 1 \text{mA}, G_v = 80 \text{dB}, R_g = 100\text{K}\Omega, \text{Function} = \text{FLAT}$		150		mV

hFE Classification

Marking	L	
	Q	R
Rank hFE	130~220	185~330

