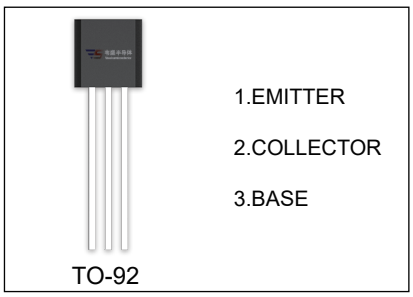
2SD1991A TRANSISTOR (NPN)



FEATURES

- High Foward Current Transfer Ratio h_{FE}
- Low Collector to Emitter Saturation Voltage $V_{CE(sat)}$.
- Allowing Supply with the Radial Taping.

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SD1991A	TO-92	Bulk	1000pcs/Bag
2SD1991A-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25 ℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Power Dissipation	400	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA,I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=2mA,I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=20V,I_E=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=7V,I_C=0			1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=10V,I_C=2mA	160		460	
	$h_{FE(2)}$	V_{CE}=2V,I_C=100mA	90			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA,I_B=10mA			0.3	V
Transition frequency	f_T	V_{CE}=10V,I_C=2mA,f=200MHz		150		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		3.5		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	160-260	210-340	290-460