

TO-92 Plastic-Encapsulate Transistors

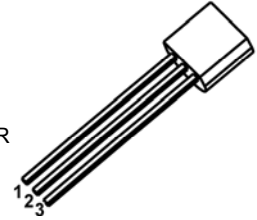
2SD1994A TRANSISTOR (NPN)

FEATURES

- Low Collector to Emitter Saturation Voltage
- Complementary Pair with 2SB1322A
- Allowing Supply with the Radial Taping

TO - 92

1. EMITTER
2. COLLECTOR
3. BASE



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	1	A
P _C	Collector Power Dissipation	625	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	200	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 0.01mA, 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 =0.01mA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =20V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)} *	V _{CE} =10V, I _C =0.5A	85		340	
	h _{FE(2)} *	V _{CE} =5V, I _C =1A	50			
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =0.5A, I _B =0.05A			0.4	V
Base-emitter voltage	V _{BE} *	V _{CE} =0.5V, I _C =0.05A			1.2	V
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz			20	pF
Transition frequency	f _T	V _{CE} =10V, I _C = 0.05A, f=200MHz		200		MHz

*Pulse test

CLASSIFICATION OF h_{FE}

RANK	Q	R	S
RANGE	85-170	120-240	170-340

