



SOT-323 Plastic-Encapsulate Transistors

2SD1819A TRANSISTOR (NPN)

FEATURES

- High DC Current Gain
- Complementary to 2SB1218A
- Low Collector to Emitter Saturation Voltage

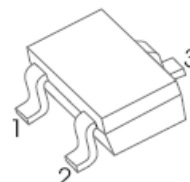
APPLICATIONS

- General Purpose Amplification

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ 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	100	mA
P_C	Collector Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	$^{\circ}\text{C/W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

SOT - 323



1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$, $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2\text{mA}$, $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$, $I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}$, $I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=10\text{V}$, $I_B=0$			100	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=7\text{V}$, $I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}$, $I_C=2\text{mA}$	160		460	
	$h_{FE(2)}$	$V_{CE}=2\text{V}$, $I_C=0.1\text{A}$	90			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$			0.3	V
Transition frequency	f_T	$V_{CE}=10\text{V}$, $I_C=2\text{mA}$, $f=200\text{MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		3.5		pF

CLASSIFICATION OF $h_{FE(1)}$

RANK	Q	R	S
RANGE	160 - 260	210 - 340	290 - 460
MARKING	ZQ	ZR	ZS