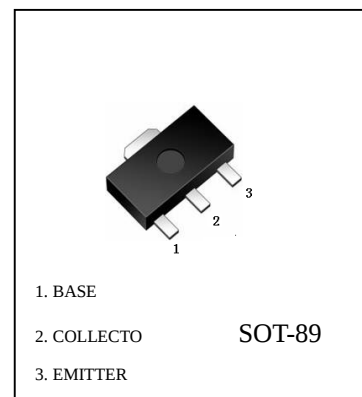


FEATURES

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Satisfactory operation performances at high efficiency with the low voltage power supply.

2SD1119 (NPN)



Maximum Ratings ($T_a=25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current -Continuous	I_C	3	A
Collector Power dissipation	P_C	0.75	W
Storage Temperature	T_{stg}	-55to +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=100\mu\text{A}$, $I_E=0$	40			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1\text{mA}$, $I_B=0$	25			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=10\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{V}$, $I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=2\text{V}$, $I_C=500\text{mA}$	230		600	
	$h_{FE(2)}$	$V_{CE}=2\text{V}$, $I_C=2\text{A}$	150			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=3\text{A}$, $I_B=0.1\text{A}$			1	V
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=50\text{mA}$, $f=200\text{MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=20\text{V}$, $f=1\text{MHz}$			50	pF

CLASSIFICATION OF h_{FE}

Rank	Q	R
Range	230-380	340-600
Marking	TQ	TR

2SD1119 Typical Characteristics

