

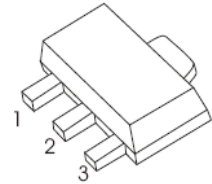
TRANSISTOR (NPN)

FEATURES

- Small Flat Package
- General Purpose Application

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	400	mA
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C/W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=80\text{V}, I_E=0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			100	nA
DC current gain	h_{FE}	$V_{CE}=2\text{V}, I_C=50\text{mA}$	70		240	
		$V_{CE}=2\text{V}, I_C=200\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=200\text{mA}, I_B=20\text{mA}$			0.4	V
Base-emitter voltage	V_{BE}	$V_{CE}=2\text{V}, I_C=5\text{mA}$	0.55		0.8	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		10		pF
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}$		100		MHz

CLASSIFICATION OF h_{FE}

RANK	O	Y
RANGE	70 - 140	120 - 240
MARKING	EO	EY