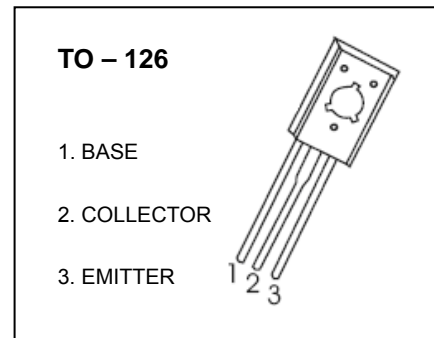


TO-126 Plastic-Encapsulate Transistors

2SC3149M TRANSISTOR (NPN)

FEATURES

- High Breakdown Voltage:
- Fast Switching Speed.
- Wide ASO (Safe Operating Area)



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	2SC3149M 88	1290
		2SC3149M 88-C	1200
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	0.6	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	100	$^{\circ}\text{C}/\text{W}$
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	$V_{(BR)CBO}^*$	$I_C=0.1\text{mA}, I_E=0$	2SC3149M 88	1290		V
			2SC3149M 88-C	1200		
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=1\text{mA}, I_B=0$	800			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=1000\text{V}, I_E=0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=5\text{V}, I_C=0.1\text{A}$	24		35	
	$h_{FE(2)}^*$	$V_{CE}=5\text{V}, I_C=0.2\text{A}$	8			
	$h_{FE(3)}^*$	$V_{CE}=5\text{V}, I_C=0.5\text{mA}$	8			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=200\text{mA}, I_B=40\text{mA}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=200\text{mA}, I_B=40\text{mA}$			1.5	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		30		pF
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=0.1\text{A},$		15		MHz

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 2.0\%$.