

SOT-89-3L Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

SOT-89-3L

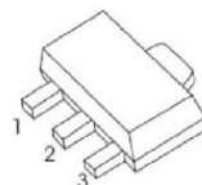
Features:

Power dissipation

1. BASE

2. COLLECTOR

3. EMITTER



MAXIMUM RATINGS °C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	0.5	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~150	°C

ELECTRICAL °C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10 mA, I_B = 0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 40V, I_E = 0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 30V, I_B = 0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6V, I_C = 0$			1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 2V, I_C = 1A$	60		400	
	$h_{FE(2)}$	$V_{CE} = 2V, I_C = 100mA$	32			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.2 A$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2A, I_B = 0.2 A$			1.5	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 0.1A$ $f = 10MHz$	50			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

Typical Characteristics

