

SOT-89-3L Plastic-Encapsulate Transistors (NPN)

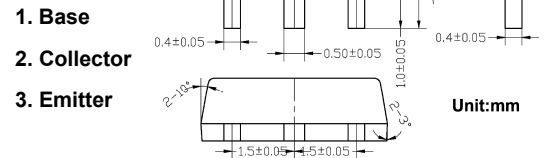
SOT-89-3L

Feature

- Power dissipation

Marking

- Marking: D882



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	40	V
V_{CEO}	Collector Emitter Voltage	30	V
V_{EBO}	Emitter Base Voltage	6	V
I_C	Collector Current - Continuous	3.0	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	$^{\circ}\text{C}/\text{W}$
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)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = 100\mu\text{A}, I_E = 0$	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = 10\text{mA}, I_B = 0$	30			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = 100\mu\text{A}, I_C = 0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB} = 40\text{V}, I_E = 0$			1	μA
I_{CEO}	Collector cut-off current	$V_{CE} = 30\text{V}, I_B = 0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = 6\text{V}, I_C = 0$			1	μA
$h_{FE(1)}$	DC current gain	$V_{CE} = 5\text{V}, I_C = 1\text{mA}$	60			
$h_{FE(2)}$		$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	50			
$h_{FE(3)}$		$V_{CE} = 2\text{V}, I_C = 1\text{A}$	60		400	
$h_{FE(4)}$		$V_{CE} = 2\text{V}, I_C = 20\text{mA}$	60			
$h_{FE(5)}$		$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	32			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 2.0\text{A}, I_B = 200\text{mA}$			0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = 2.0\text{A}, I_B = 200\text{mA}$			1.5	V
f_T	Transition frequency	$V_{CE} = 5\text{V}, I_C = 0.1\text{A}, f = 10\text{MHz}$	50			MHz

Classification of $h_{FE(1)}$

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



Typical Characteristics

