



SOT-89-3L Plastic-Encapsulate Transistors

2SB647 TRANSISTOR (PNP)

FEATURES

- Low Frequency Power Amplifier
- Complementary Pair with 2SD667

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

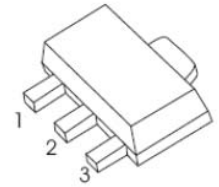
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1	A
P_C	Collector Power Dissipation	750	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	167	$^\circ\text{C}/\text{W}$
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$

SOT-89-3L

1. BASE

2. COLLECTOR

3. EMITTER



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-100\text{V}, I_E=0$			-10	μA
DC current gain	$h_{FE(1)}$ *	$V_{CE}=-5\text{V}, I_C=-150\text{mA}$	60		320	
	$h_{FE(2)}$ *	$V_{CE}=-5\text{V}, I_C=-500\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-1	V
Base-emitter voltage	V_{BE} *	$V_{CE}=-5\text{V}, I_C=-150\text{mA}$			-1.5	V
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		20		pF
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-150\text{mA}$		140		MHz

*Pulse test

CLASSIFICATION OF $h_{FE(1)}$

RANK	B
RANGE	150-250