

# SOT-89-3L Plastic-Encapsulate Transistors

**2SC2881** TRANSISTOR (NPN)

## FEATURES

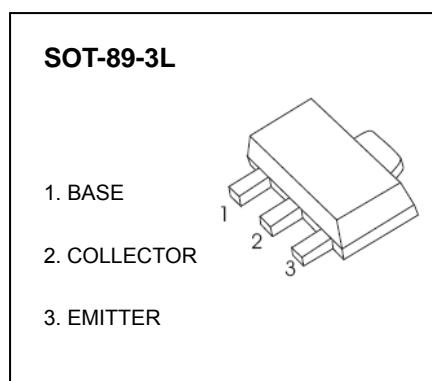
- Small Flat Package
- High Transition Frequency
- High Voltage
- Complementary to 2SA1201

## APPLICATIONS

- Power Amplifier and Voltage Amplifier

## 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	120	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	800	mA
$P_c$	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	°C/W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	120			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=120\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=100\text{mA}$	80		240	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$			1	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=100\text{mA}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			30	pF

## CLASSIFICATION OF $h_{FE}$

RANK	O	Y
RANGE	80 ~ 160	120 ~ 240
MARKING	CO1	CY1