

**NPN Transistors**

—NPN Silicon—

**■ ■ APPLICATION:** Medium Power Amplifier Applications.

**■ ■ MAXIMUM RATINGS** (Ta=25°C)

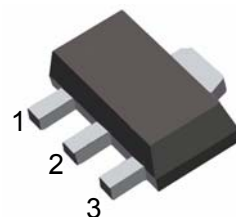
PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V <sub>CB0</sub>	80	V
Collector-emitter voltage	V <sub>CEO</sub>	80	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>c</sub>	0.7	A
Collector Power Dissipation	P <sub>c</sub>	0.5	W
		2	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C

**SOT-89**

1. BASE

2. COLLECTOR

3. EMITTER


**■ ■ ELECTRICAL CHARACTERISTICS** (Ta=25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Collector-Base Breakdown Voltage	BV <sub>cb0</sub>	80			V	I <sub>c</sub> =50uA I <sub>e</sub> =0
Collector-Emitter Breakdown Voltage	BV <sub>ceo</sub>	80			V	I <sub>c</sub> =2mA I <sub>b</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>eb0</sub>	5			V	I <sub>e</sub> =50uA I <sub>c</sub> =0
Collector Cut-off Current	I <sub>cbo</sub>			0.5	uA	V <sub>cb</sub> =50V I <sub>e</sub> =0
Emitter Cut-off Current	I <sub>ebo</sub>			0.5	uA	V <sub>eb</sub> =4V I <sub>c</sub> =0
Collector-Emitter Saturation Voltage	V <sub>ce(sat)</sub>		0.2	0.4	V	I <sub>c</sub> =0.5A I <sub>b</sub> =0.05A
DC Current Gain	h <sub>FE</sub>	82		390	β	V <sub>ce</sub> =3V I <sub>c</sub> =0.1A
Gain bandwidth product	f <sub>T</sub>		120		MHz	V <sub>ce</sub> =10V I <sub>e</sub> =-0.05A f=100MHz
Common Base Output Capacitance	C <sub>ob</sub>		10		pF	V <sub>cb</sub> =10V I <sub>e</sub> =0 f=1MHz

**■ ■ h<sub>FE</sub> Classification And Marking**

Print Mark	DCP	DCQ	DCR
Classification	P	Q	R
h <sub>FE</sub>	82~180	120~270	180~390