

**NPN Transistors**

—NPN Silicon—

**■■ APPLICATION:** Driver Stages of Audio and Video Amplifier Applications.

**■■ MAXIMUM RATINGS** (Ta=25°C)

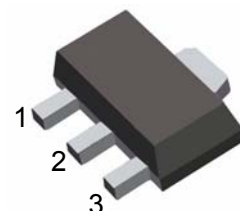
PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V <sub>CBO</sub>	100	V
Collector-emitter voltage	V <sub>CEO</sub>	80	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>c</sub>	1	A
Collector current (Pulse)	I <sub>CM</sub>	1.5	A
Collector Power Dissipation	P <sub>c</sub>	1.3	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-65~150	°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>cbo</sub>	100			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> =1mA I <sub>b</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>ebo</sub>	5			V	I <sub>e</sub> =50uA I <sub>c</sub> =0
Collector Cut-off Current	I <sub>cbo</sub>			0.1	uA	V <sub>cb</sub> =30V I <sub>e</sub> =0
Emitter Cut-off Current	I <sub>ebo</sub>			0.1	uA	V <sub>eb</sub> =5V I <sub>c</sub> =0
Base-Emitter Voltage	V <sub>BE</sub>			1	V	V <sub>ce</sub> =2V I <sub>c</sub> =0.5A
Collector-Emitter Saturation Voltage	V <sub>ce(sat)</sub>			0.5	V	I <sub>c</sub> =0.5A I <sub>b</sub> =0.05A
DC Current Gain	h <sub>FE</sub>	63		250	β	V <sub>ce</sub> =2V I <sub>c</sub> =0.15A
Gain bandwidth product	f <sub>T</sub>		130		MHz	V <sub>ce</sub> =5V I <sub>c</sub> =10mA f=100MHz

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

Print Mark	BH	BK	BL
Classification			
h <sub>FE</sub>	63~250	63~160	100-250