Elektronische Bauelemente

BCP194

NPN Silicon
Planar Medium Power Transistor

RoHS Compliant Product

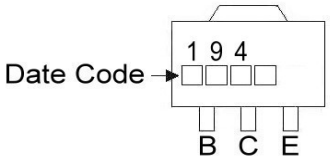
Description

The BCP194 is designed for medium power amplifier applications.

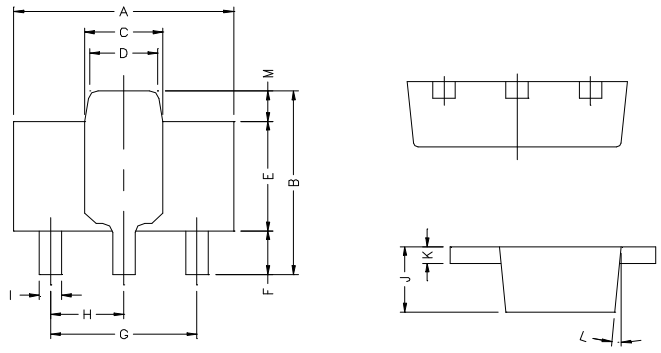
Features

* 1 Amp Continuous Current
* 60 Volt V_{CEO}
* Complementary to BCP195

Marking :



SOT-89



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00 REF.	
B	4.05	4.25	H	1.50 REF.	
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

Absolute Maximum Ratings at T_A=25°C

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	1	A
	Collector Current (Pulse)	2	
I_B	Base Current	200	mA
P_D	Total Power Dissipation	1	W
T_J,T_{stg}	Junction and Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS Tamb=25°C unless otherwise specified

Parameter	Symbol	Min	Typ.	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	80	-	-	V	I_C=100μA,I_E=0
Collector-Emitter Breakdown Voltage	*BV_{CEO}	60	-	-	V	I_C=10mA,I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	5	-	-	V	I_E=100μA,I_C=0
Collector-Base Cutoff Current	I_{CBO}	-	-	100	nA	V_{CB}= 60V,I_E=0
Emitter-Base Cutoff Current	I_{CES}	-	-	100	nA	V_{CES}=60V
Emitter-Base Cutoff Current	I_{EBO}	-	-	100	nA	V_{EB}=4V,I_C=0
Collector Saturation Voltage	*V_{CE}(sat)1	-	-	0.25	V	I_C=500mA,I_B=50mA
	*V_{CE}(sat)2	-	-	0.5	V	I_C=1A,I_B=100mA
Base-Emitter Saturation Voltage	*V_{BE}(sat)	-	-	1.1	V	I_C=1A,I_B=100mA
	*V_{BE}(on)	-	-	1	V	I_C=1A,V_{CE}=5V
DC Current Gain	*h_{FE1}	100	-	-		V_{CE}= 5V, I_C=1mA
	*h_{FE2}	100	-	300		V_{CE}= 5V, I_C=500mA
	*h_{FE3}	80	-	-		V_{CE}= 5V, I_C=1A
	*h_{FE4}	30	-	-		V_{CE}= 5V, I_C=2A
Gain-Bandwidth Product	fT	150	-	-	MHz	V_{CE}= 10V, I_C=50mA,f=100MHz
Output Capacitance	Cob	-	-	10	pF	V_{CB}=10V, f=1MHz,I_E=0

*Measured under pulse condition.Pulse width≦300μs, Duty Cycle≦2%

Elektronische Bauelemente

BCP194

NPN Silicon
Planar Medium Power Transistor

Characteristics Curve