

RoHS Compliant Product

SOT-89

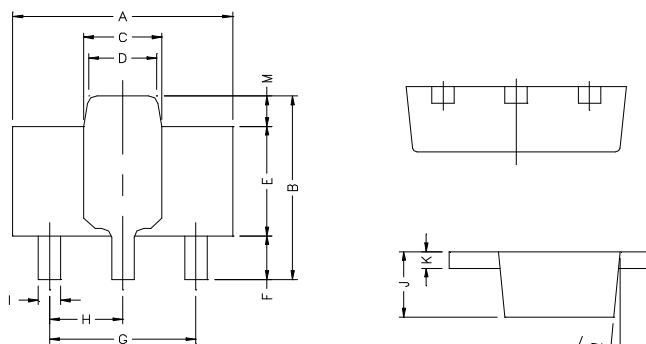
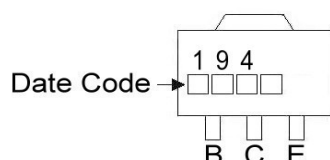
Description

The BCP194 is designed for medium power amplifier applications.

Features

- * 1 Amp Continuous Current
- * 60 Volt V_{CE0}
- * Complementary to BCP195

Marking :



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 $T_A=25^\circ\text{C}$

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	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS $T_{amb}=25^\circ\text{C}$ unless otherwise specified

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

* Measured under pulse condition. Pulse width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Characteristics Curve

