

Silicon NPN Power Transistor

BD807

DESCRIPTION

- DC Current Gain -
 : $h_{FE} = 30(\text{Min.}) @ I_C = 2A$
- Collector-Emitter Sustaining Voltage-
 : $V_{CEO(\text{SUS})} = 60V(\text{Min})$
- Complement to Type BD808

APPLICATIONS

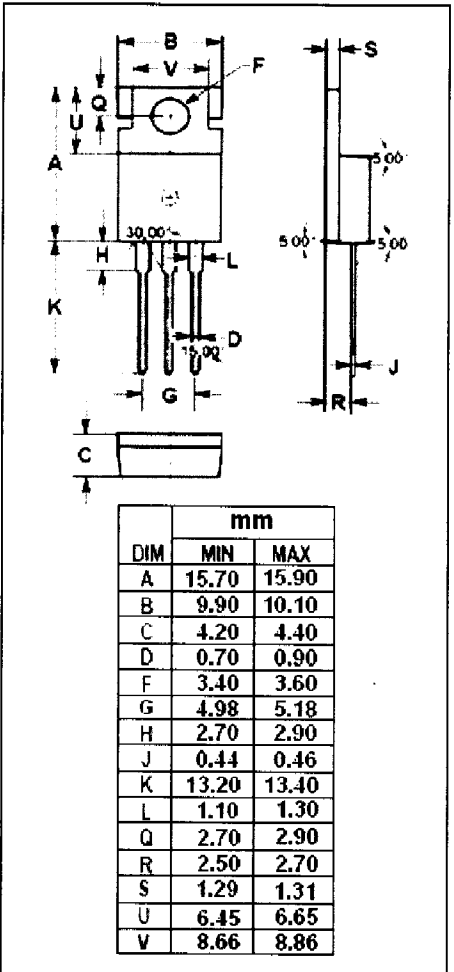
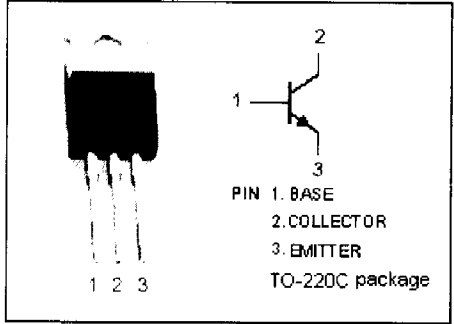
- Designed for use in high power audio amplifiers utilizing complementary or quasi complementary circuits.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current	6	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	90	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{th-j-c}	Thermal Resistance, Junction to Case	1.39	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage:	$I_C= 200\text{mA}; I_B= 0$	60		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 4\text{A}; I_B= 0.4\text{A}$		1.1	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 4\text{A}; V_{CE}= 2\text{V}$		1.6	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 70\text{V}; I_E= 0$		1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$		2.0	mA
h_{FE-1}	DC Current Gain	$I_C= 2\text{A}; V_{CE}= 2\text{V}$	30		
h_{FE-2}	DC Current Gain	$I_C= 4\text{A}; V_{CE}= 2\text{V}$	15		
f_T	Current-Gain—Bandwidth Product	$I_C= 1.0\text{A}; V_{CE}= 10\text{V}; f_{test}= 1.0\text{MHz}$	1.5		MHz