

Plastic High Power Silicon PNP Transistor

... designed for use up to 30 Watt audio amplifiers utilizing complementary or quasi complementary circuits.

• DC Current Gain —

 $h_{FE} = 40 \text{ (Min)} @ I_C = 1.0 \text{ Adc}$

• BD802 is complementary with BD 795, 797, 799, 801

MAXIMUM RATINGS

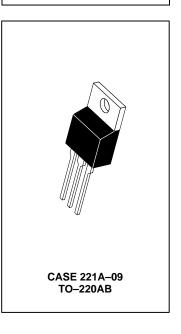
Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V _{CEO}	100	Vdc
Collector-Base Voltage	V _{CBO}	100	Vdc
Emitter–Base Voltage	V _{EBO}	5.0	Vdc
Collector Current	I _C	8.0	Adc
Base Current	I _B	3.0	Adc
Total Device Dissipation T _C = 25°C Derate above 25°C	P _D	65 522	Watts mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θЈС	1.92	°C/W

BD802

8 AMPERE
POWER TRANSISTORS
PNP SILICON
100 VOLTS
65 WATTS



ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Sustaining Voltage* (I _C = 0.05 Adc, I _B = 0)	BV _{CEO}	100	_	Vdc
Collector Cutoff Current (V _{CB} = 100 Vdc, I _E = 0)	I _{CBO}	_	0.1	mAdc
Emitter Cutoff Current (V _{BE} = 5.0 Vdc, I _C = 0)	I _{EBO}	_	1.0	mAdc
DC Current Gain $(I_C = 1.0 \text{ A}, V_{CE} = 2.0 \text{ V})$ $(I_C = 3.0 \text{ A}, V_{CE} = 2.0 \text{ V})$	h _{FE}	30 15		
Collector–Emitter Saturation Voltage* (I _C = 3.0 Adc, I _B = 0.3 Adc)	V _{CE(sat)}	_	1.0	Vdc
Base–Emitter On Voltage* (I _C = 3.0 Adc, V _{CE} = 2.0 Vdc)	V _{BE(on)}	_	1.6	Vdc
Current–Gain — Bandwidth Product $(I_C = 0.25 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = \text{MHz})$	f⊤	3.0	_	MHz

^{*}Pulse Test: Pulse Width \leq 300 μ s, Duty Cycle \leq 2.0.

BD802

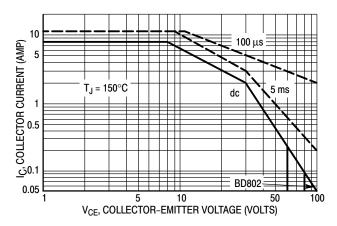


Figure 1. Active Region Safe Operating Area

The Safe Operating Area Curves indicate $I_C - V_{CE}$ limits below which the device will not enter secondary breakdown. Collector load lines for specific circuits must fall within the applicable Safe Area to avoid causing a catastrophic failure. To insure operation below the maximum T_J , power–temperature derating must be observed for both steady state and pulse power conditions.

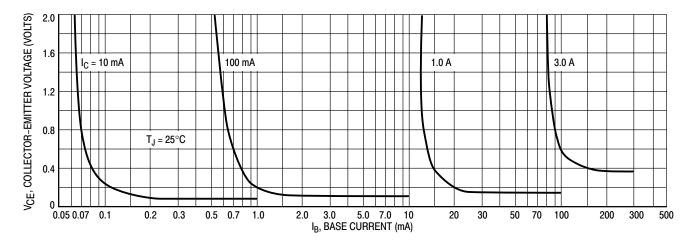


Figure 2. Collector Saturation Region

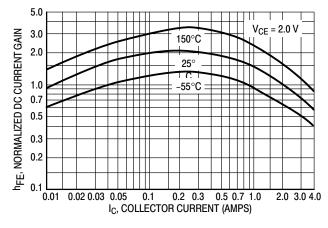


Figure 3. Normalized DC Current Gain

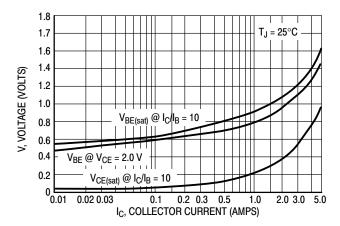


Figure 4. "On" Voltage

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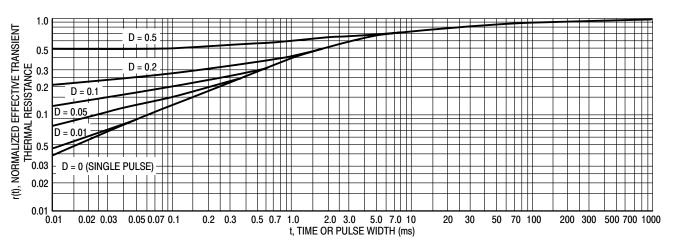
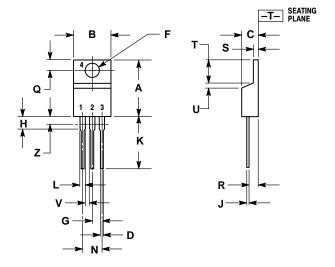


Figure 5. Thermal Response

BD802

PACKAGE DIMENSIONS

TO-220AB **CASE 221A-09 ISSUE AA**



NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: INCH.
 DIMENSION Z DEFINES A ZONE WHERE ALL
 BODY AND LEAD IRREGULARITIES ARE ALLOWED.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
Α	0.570	0.620	14.48	15.75
В	0.380	0.405	9.66	10.28
c	0.160	0.190	4.07	4.82
D	0.025	0.035	0.64	0.88
F	0.142	0.147	3.61	3.73
G	0.095	0.105	2.42	2.66
H	0.110	0.155	2.80	3.93
7	0.018	0.025	0.46	0.64
K	0.500	0.562	12.70	14.27
L	0.045	0.060	1.15	1.52
N	0.190	0.210	4.83	5.33
Q	0.100	0.120	2.54	3.04
R	0.080	0.110	2.04	2.79
S	0.045	0.055	1.15	1.39
T	0.235	0.255	5.97	6.47
5	0.000	0.050	0.00	1.27
٧	0.045		1.15	
Z		0.080		2.04

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