

6367254 MOTOROLA SC (XSTRS/R F)

96D 80569 D7-33-21

MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

BD206
BD208

PLASTIC HIGH POWER
SILICON PNP TRANSISTOR

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

- DC Current— $h_{FE} = 30$ (Min) @ $I_C = 2.0$ Adc
- BD 206, 208 are complementary with BD 205, 207

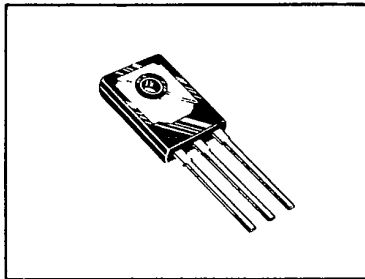
10 AMPERE
POWER TRANSISTOR

PNP SILICON

45, 60 VOLTS
90 WATTS

MAXIMUM RATINGS

Rating	Symbol	Type	Value	Unit
Collector-Emitter Voltage	V_{CEO}	BD 206 BD 208	45 60	Vdc
Collector-Base Voltage	V_{CBO}	BD 206 BD 208	55 70	Vdc
Emitter-Base Voltage	V_{EBO}		5	Vdc
Collector Current	I_C		10.0	Adc
Base Current	I_B		6.0	Adc
Total Device Dissipation Derate above 25°C	P_D		90 720	Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}		-55 to +150	°C



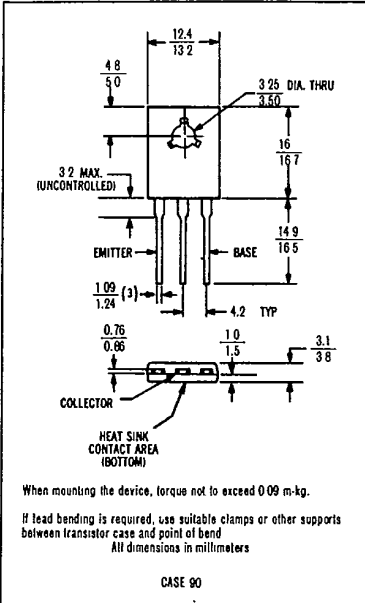
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	1.39	°C/W

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Type	Min	Max	Unit
Collector-Emitter Sustaining Voltage* ($I_C = 0.2$ Adc, $I_B = 0$)	BV_{CEO}	BD 206 BD 208	45 60	—	Vdc
Collector Cutoff Current ($V_{CB} = 55$ Vdc, $I_C = 0$) ($V_{CB} = 70$ Vdc, $I_E = 0$)	I_{CBO}	BD 206 BD 208	—	1.0	mAdc
Emitter Cutoff Current ($V_{BE} = 5.0$ Vdc, $I_C = 0$)	I_{EBO}		—	2.0	mAdc
DC current Gain ($I_C = 2$ A, $V_{CE} = 2$ V) ($I_C = 4$ A, $V_{CE} = 2$ V)	h_{FE}		30 15	—	
Collector-Emitter Saturation Voltage* ($I_C = 4$ Adc, $I_B = 0.4$ Adc)	$V_{CE(sat)}$		—	1.1	Vdc
Base-Emitter On Voltage* ($I_C = 4$ Adc, $V_{CE} = 2.0$ Vdc)	$V_{BE(on)}$		—	1.6	Vdc
Current-Gain-Bandwidth Product ($I_C = 1.0$ Adc, $V_{CE} = 10$ Vdc, $f = 1.0$ MHz)	f_T		1.5	—	MHZ

* Pulse Test: Pulse Width ≤ 300 μ s. Duty Cycle $\leq 2.0\%$.



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96D 80570 D

BD206, BD208

T-33-21

FIGURE 1 — ACTIVE REGION DC SAFE OPERATING AREA

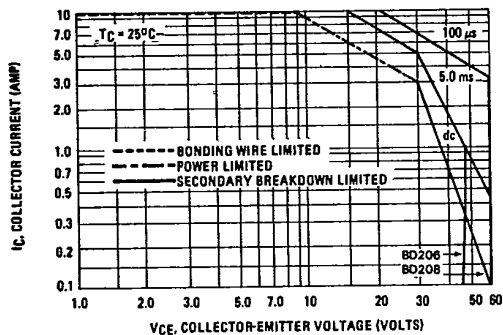


FIGURE 2 — POWER-TEMPERATURE DERATING CURVE

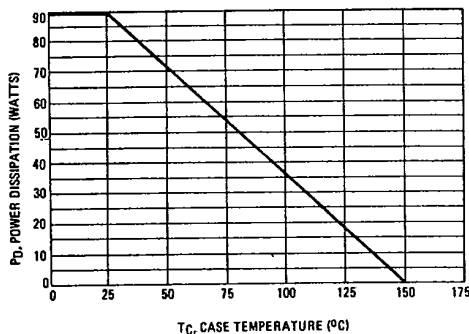


FIGURE 3 — "ON" VOLTAGES

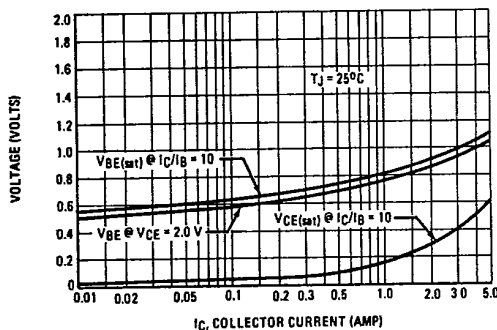


FIGURE 4 — CURRENT GAIN

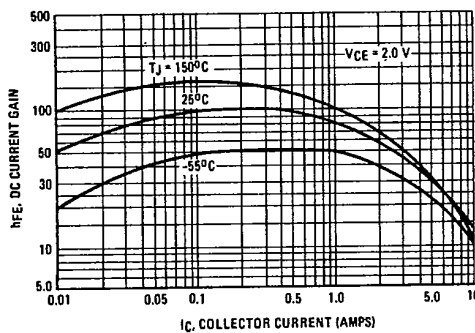


FIGURE 5 — THERMAL RESPONSE

