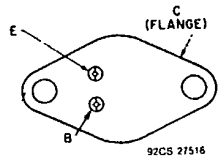
File Number **1109**

BD550, BD550B

Silicon Transistors for Quasi-Complementary-Symmetry Audio Amplifiers

TERMINAL DESIGNATIONS



JEDEC TO-204AA

The RCA-BD550 and BD550B are silicon n-p-n transistors especially suitable for applications in audio-amplifier circuits, in which they may be used as either driver or output unit.

The devices, together with a variety of other transistors that serve as input devices, V_{BE} amplifiers for biasing, current sources, load-line limiters (for overload protection), and pre-drivers, may be used to develop several hundred watts of audio output power in quasi-complementary-symmetry audio amplifier configurations that employ parallel output transistors.

The BD-550-series is supplied in the JEDEC TO-204AA hermetic steel case.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

	BD550	BD550B	
V_{CBO}	130	275	V
V_{CEO}	110	250	V
$V_{CER}(R_{BE} = 100\ \Omega)$	130	275	V
V_{EBO}	5		V
I_C	7		A
I_B	2		A
P_T			
At $T_C \leq 25°C$	150		W
At $T_C > 25°C$	See Fig. 1		W/°C
T_{stg}, T_J	-65 to 200		°C
T_L			
At distances ≥ 1/32 in. (0.8 mm) from seating plane for 10 s max.	230		°C

BD550, BD550B

ELECTRICAL CHARACTERISTICS, *At Case Temperature (T_C) =25° C*

CHARACTERISTIC	TEST CONDITIONS	LIMITS				UNITS
		BD550		BD550B•		
		Min.	Max.	Min.	Max.	
I_{CER} R_{BE} = 100 Ω	V_{CE} = 110 V V_{CE} = 250 V	— —	1 —	— —	— 1	mA
I_{CEO}	V_{CE} = 95 V V_{CE} = 200 V	— —	5 —	— —	— 5	mA
I_{EBO}	V_{EB} = 5 V	—	1	—	1	mA
V_{CEO}	I_C = 0.2 A	110	—	250	—	V
V_{CER}	I_C = 0.2 A; R_{BE} = 100 Ω	130	—	275	—	V
f_T	I_C = 0.2 A; V_{CE} = 10 V	5 typ.		5 typ.		MHz
h_{FE}	I_C = 4 A; V_{CE} = 4 V I_C = 2A; V_{CE} = 4 V	15 —	75 —	— 10	— 50	
V_{CE}(sat)	I_C = 4 A; I_B = 0.5 A I_C = 2A; I_B = 0.25 A	— —	2 —	— —	— 2	V
V_{BE}	I_C = 4 A; V_{CE} = 4 V I_C = 2 A; V_{CE} = 4 V	0.75 —	1.75 —	— 1	— 2	V
$I_{S/b}$	V_{CE} = 80 V; t = 1 S V_{CE} = 140 V; t = 1 S	1.87 —	— —	— 1.07	— —	A

▲For characteristics curves and test conditions, refer to published data for prototype RCA8638D (File 1060).
•For characteristics curves and test conditions, refer to published data for prototype 2N5240 (File 321).

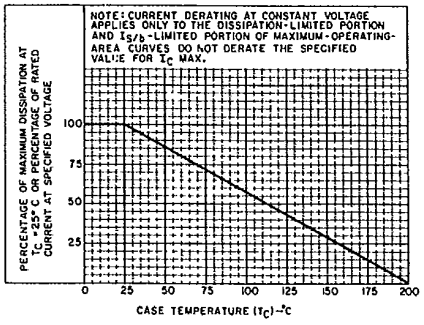


Fig. 1 — Derating curve for all types.

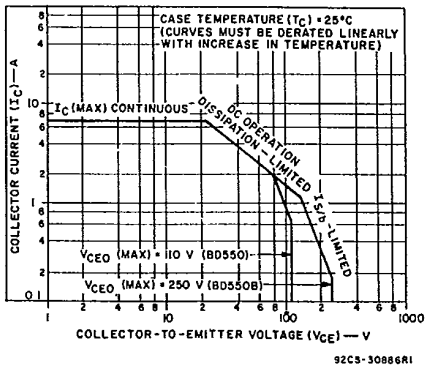


Fig. 2 — Maximum operating areas for all types.