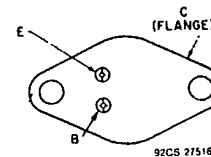


File Number 1109

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	150		W
At $T_c \leq 25^\circ\text{C}$	See Fig. 1		$W/^\circ\text{C}$
At $T_c > 25^\circ\text{C}$	-65 to 200		$^\circ\text{C}$
T_{stg}, T_J			
T_L			
At distances $\geq 1/32$ in. (0.8 mm) from seating plane for 10 s max.	230		$^\circ\text{C}$

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01E 17553 D T-33-13

BD550, BD550B

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

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

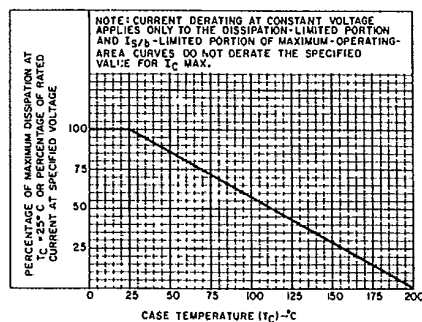


Fig. 1 — Derating curve for all types.

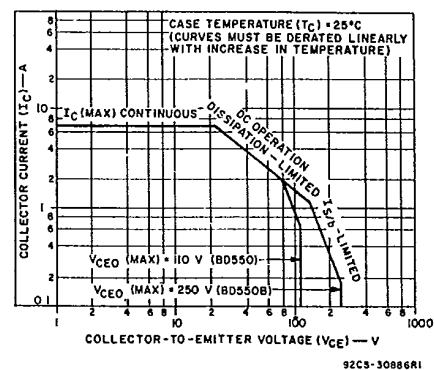


Fig. 2 — Maximum operating areas for all types.