

3875081 G E SOLID STATE

01E 17474 D T-33-13

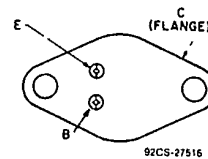
General-Purpose Power Transistors

RCA1B04, RCA1B05

File Number 908

Silicon Transistors for Audio-Amplifier Applications

TERMINAL DESIGNATIONS



JEDEC TO-204AA

The RCA1B04 and RCA1B05 are silicon n-p-n transistors in a JEDEC TO-204AA package. They are especially suitable for applications in audio-amplifier circuits, in which they may be used as either driver or output unit.

These 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 predrivers, may be used to develop several hundred watts of audio output power in quasi-complementary-symmetry audio-amplifier configurations that employ parallel output transistors.

MAXIMUM RATINGS, Absolute-Maximum Values:

	RCA1B04	RCA1B05	
V_{CE0}	225	275	V
V_{CE0}	200	250	V
$V_{CE0} R_{BE} = 100 \Omega$	225	275	V
V_{EBO}	5		V
I_C	7		V
I_B	2		A
P_T	150		W
At $T_C \leq 25^\circ C$	See Fig. 1		$^\circ C$
At $T_C > 25^\circ C$	-65 to 150		$^\circ C$
T_{sig}, T_J	230		$^\circ C$
T_L At distance $\geq 1/32$ in. (0.8 mm) from seating plane for 10 s max.			

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General-Purpose Power Transistors

RCA1B04, RCA1B05

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

CHARAC- TERISTIC	TEST CONDITIONS	LIMITS						UNITS
		RCA1B04▲		RCA1B05*		RCA1B09**		
		Min.	Max.	Min.	Max.	Min.	Max.	
I _{CER}	V _{CE} = 120 V, R _{BE} = 100 Ω	—	1	—	—	—	—	mA
	V _{CE} = 200 V, R _{BE} = 100 Ω	—	—	—	1	—	1	
I _{EBO}	V _{EB} = 5 V, I _C = 0	—	1	—	1	—	1	mA
V _{CEO}	I _C = 0.2 A, I _B = 0	200	—	250	—	250	—	V
V _{CER}	I _C = 0.2 A, R _{BE} = 100 Ω	225	—	275	—	275	—	V
f _T	I _C = 0.2 A, V _{CE} = 10 V	5	—	5	—	—	—	MHz
	I _C = 1 A, V _{CE} = 15 V	—	—	—	—	5	—	
h _{FE}	I _C = 2 A, V _{CE} = 5 V	15	75	15	75	40	—	
V _{CE(sat)}	I _C = 2 A, I _B = 0.255 A	—	2	—	2	—	—	V
	I _C = 2 A, I _B = 0.2 A	—	—	—	—	—	1	
V _{BE}	I _C = 2 A, V _{CE} = 5 V	0.75	1.75	0.75	1.75	—	1	V
I _{S/b}	V _{CE} = 120 V, t = 1 s	1.25	—	—	—	—	—	A
	V _{CE} = 140 V, t = 1 s	—	—	1.07	—	—	—	
	V _{CE} = 80 V, t = 1 s	—	—	—	—	1.875	—	

▲ For characteristics curves and test conditions, refer to published data for prototype 2N5239 (File 321).

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

** For characteristics curves and test conditions, refer to published data for prototype 2N6510 (File 848).

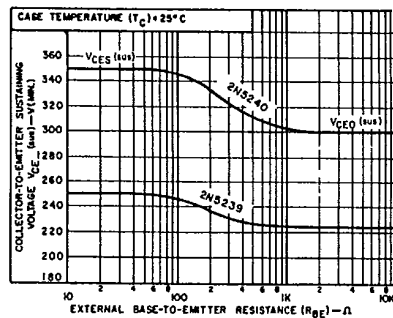


Fig. 1 — Derating curves for all types.

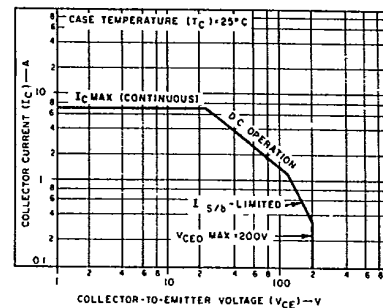


Fig. 2 — Maximum operating areas for RCA1B04.

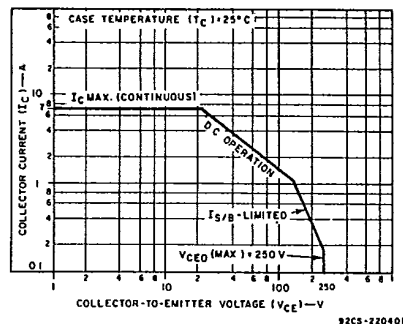


Fig. 3 — Maximum operating areas for RCA1B05.