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# 2SC1881(K)

Silicon NPN Triple Diffused

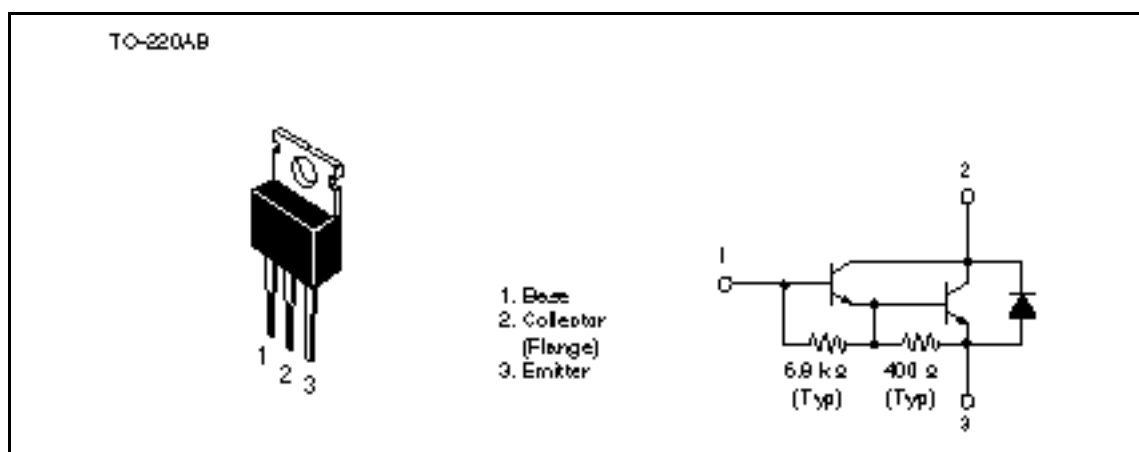
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## Application

High gain amplifier power switching

## Outline



## Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	60	V
Collector to emitter voltage	$V_{CEO}$	60	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	3	A
Collector peak current	$I_{C(peak)}$	6	A
Collector power dissipation	$P_C^{*1}$	30	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

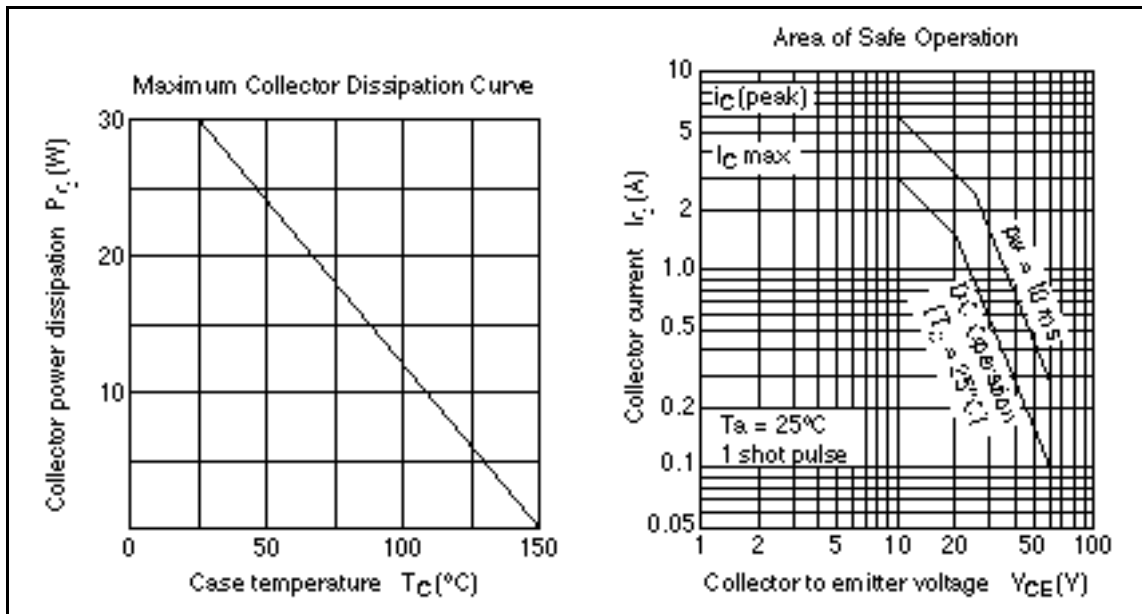
Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

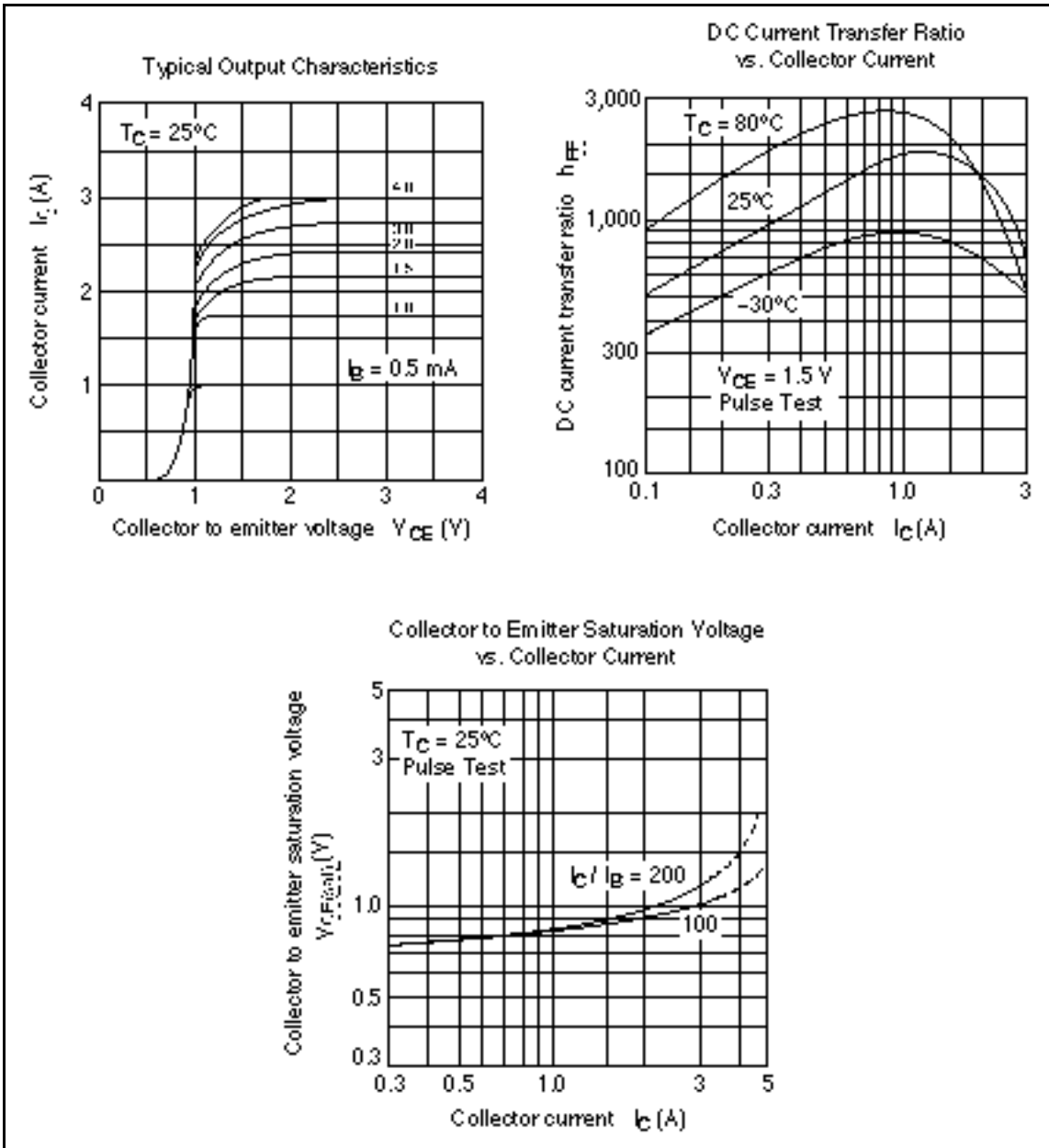
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### Electrical Characteristics (Ta = 25°C)

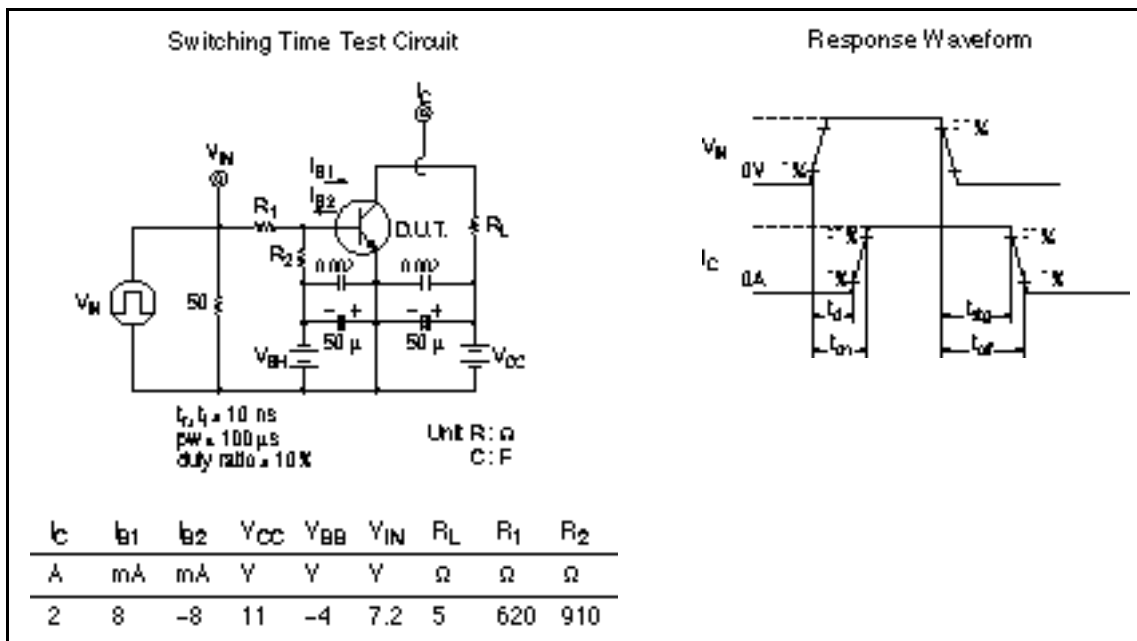
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	V	$I_C = 50 \text{ mA}$ , $R_{BE} =$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 50 \text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	0.2	mA	$V_{CB} = 60 \text{ V}$ , $I_E = 0$
	$I_{CEO}$	—	—	0.4	mA	$V_{CE} = 30 \text{ V}$ , $R_{BE} =$
DC current transfer ratio	$h_{FE}$	1000	—	—		$V_{CE} = 1.5 \text{ V}$ $I_C = 1.5 \text{ A}^{*1}$
		500	—	—		$I_C = 2.5 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.2	V	$I_C = 2.5 \text{ A}$ , $I_B = 20 \text{ mA}^{*1}$
Turn on time	$t_{on}$	—	1	—	$\mu\text{s}$	$V_{CC} = 11 \text{ V}$ , $I_C = 2 \text{ A}$ ,
Turn off time	$t_{off}$	—	5	—	$\mu\text{s}$	$I_{B1} = -I_{B2} = 8 \text{ mA}$

Note: 1. Pulse test.





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