

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5200

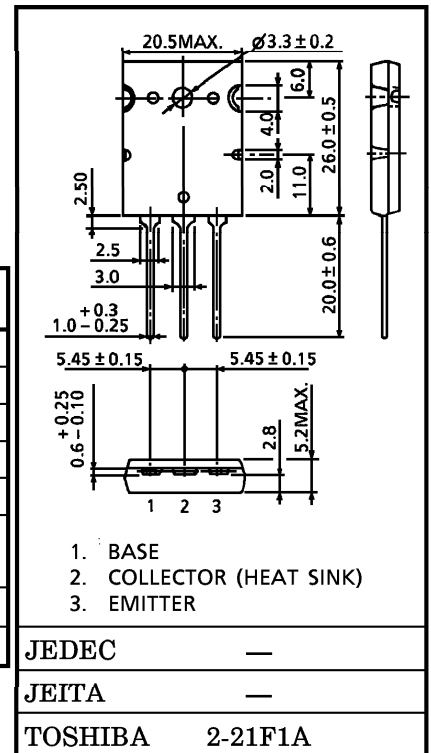
POWER AMPLIFIER APPLICATIONS

- Complementary to 2SA1943
- Recommended for 100W High Fidelity Audio Frequency Amplifier Output Stage.

MAXIMUM RATINGS (T<sub>c</sub> = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	230	V
Collector-Emitter Voltage	V <sub>CEO</sub>	230	V
Emitter-Base Voltage	V <sub>EB0</sub>	5	V
Collector Current	I <sub>C</sub>	15	A
Base Current	I <sub>B</sub>	1.5	A
Collector Power Dissipation (T <sub>c</sub> = 25°C)	P <sub>C</sub>	150	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C

Unit in mm



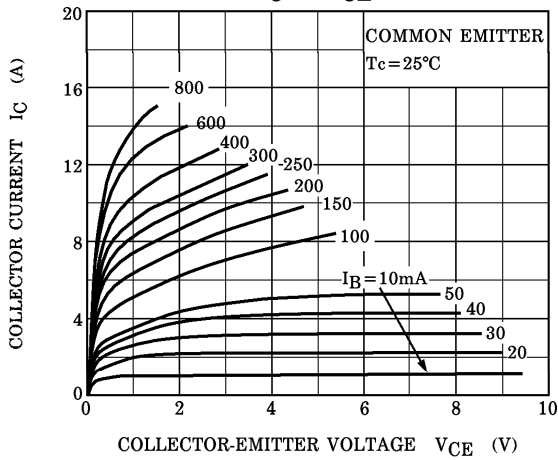
Weight : 9.75g (Typ.)

ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25°C)

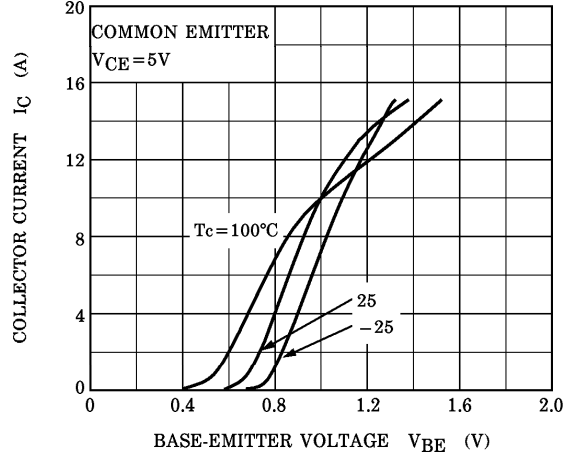
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I <sub>CB0</sub>	V <sub>CB</sub> = 230V, I <sub>E</sub> = 0	—	—	5.0	μA
Emitter Cut-off Current	I <sub>EB0</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0	—	—	5.0	μA
Collector-Emitter Breakdown Voltage	V (BR) CEO	I <sub>C</sub> = 50mA, I <sub>B</sub> = 0	230	—	—	V
DC Current Gain	h <sub>FE</sub> (1) (Note)	V <sub>CE</sub> = 5V, I <sub>C</sub> = 1A	55	—	160	
	h <sub>FE</sub> (2)	V <sub>CE</sub> = 5V, I <sub>C</sub> = 7A	35	60	—	
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = 8A, I <sub>B</sub> = 0.8A	—	0.40	3.0	V
Base-Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 7A	—	1.0	1.5	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 1A	—	30	—	MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f = 1MHz	—	200	—	pF

(Note) : h<sub>FE</sub> (1) Classification R : 55~110, O : 80~160

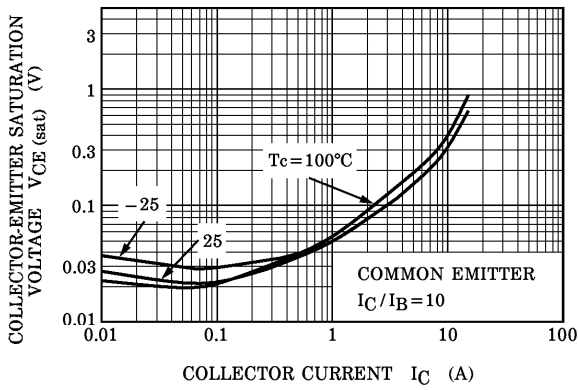
**$I_C - V_{CE}$**



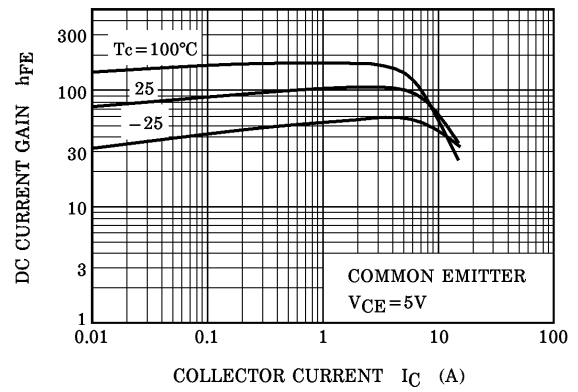
**$I_C - V_{BE}$**



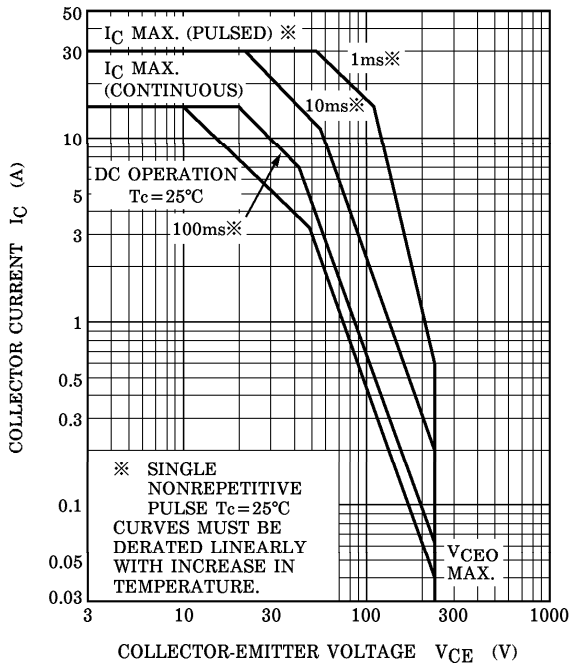
**$V_{CE}(\text{sat}) - I_C$**



**$h_{FE} - I_C$**



**SAFE OPERATING AREA**



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