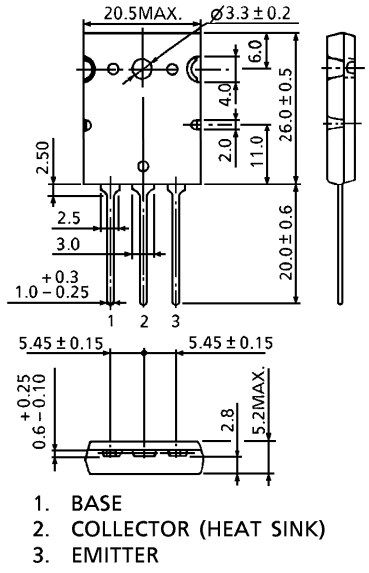
TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5199

POWER AMPLIFIER APPLICATIONS

Unit in mm

- Complementary to 2SA1942
- Recommend for 80 W High Fidelity Audio Frequency Amplifier Output Stage.



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	—
JEITA	—
TOSHIBA	2-21F1A

Weight : 9.75 g (Typ.)

MAXIMUM RATINGS (Tc = 25°C)

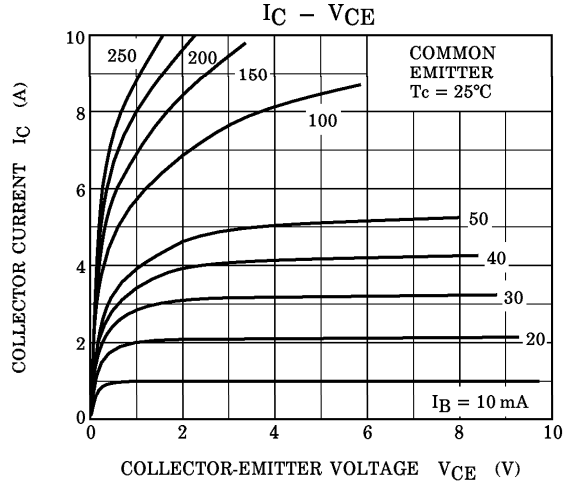
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	160	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	12	A
Base Current	I_B	1.2	A
Collector Power Dissipation (Tc = 25°C)	P_C	120	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

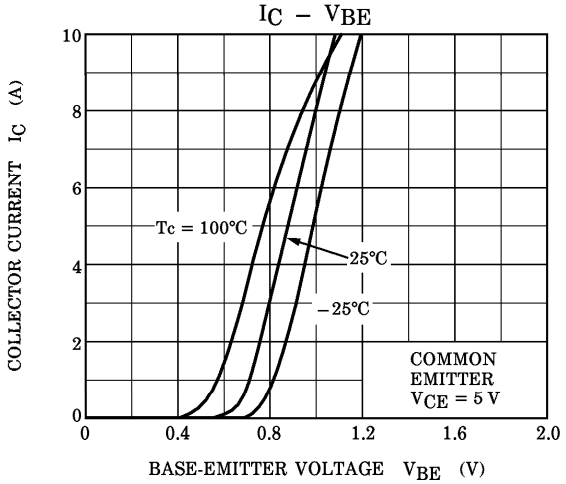
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 160 V, I_E = 0	—	—	5.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5 V, I_C = 0	—	—	5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 50 mA, I_B = 0	160	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	V_{CE} = 5 V, I_C = 1 A	55	—	160	
	$h_{FE(2)}$	V_{CE} = 5 V, I_C = 6 A	35	74	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 8 A, I_B = 0.8 A	—	0.35	2.5	V
Base-Emitter Voltage	V_{BE}	V_{CE} = 5 V, I_C = 6 A	—	1.0	1.5	V
Transition Frequency	f_T	V_{CE} = 5 V, I_C = 1 A	—	30	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz	—	170	—	pF

(Note) : $h_{FE(1)}$ Classification R : 55~110, O : 80~160

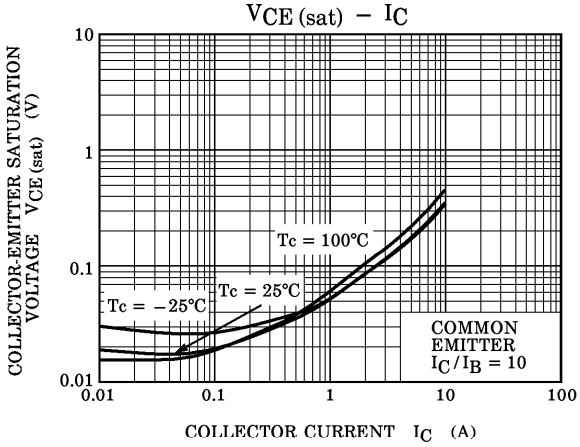
$I_C - V_{CE}$



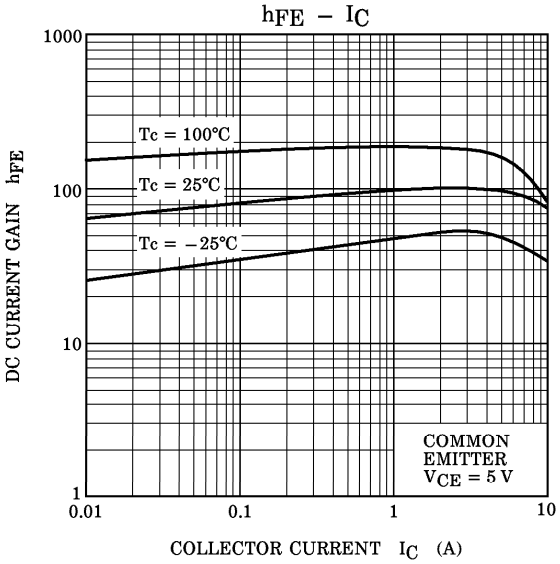
$I_C - V_{BE}$



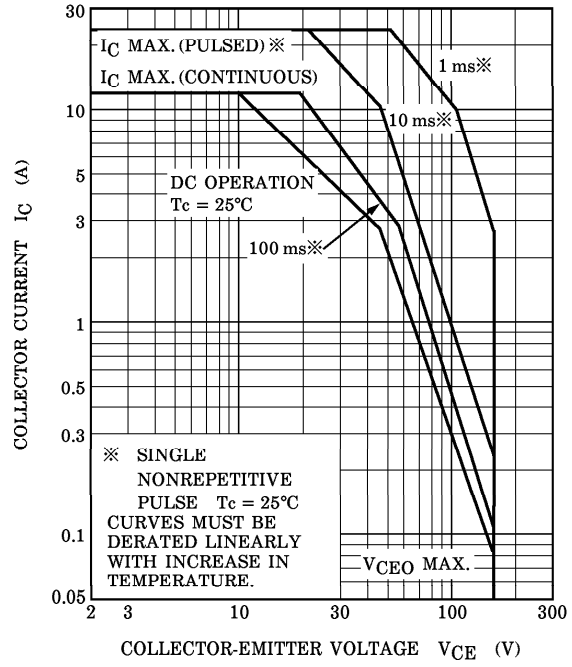
$V_{CE\,(sat)} - I_C$



$h_{FE} - I_C$



SAFE OPERATING AREA



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