TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

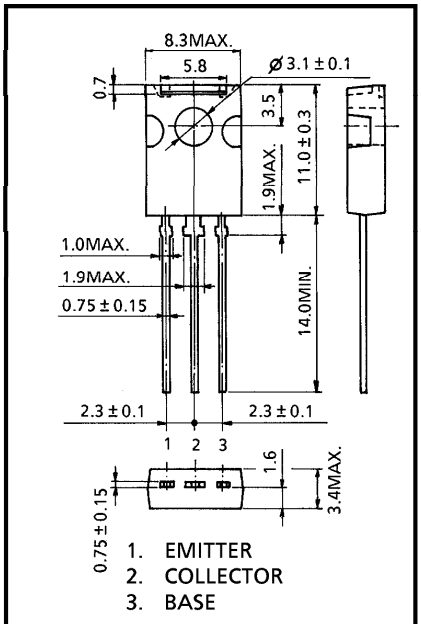
2SC3963

HIGH VOLTAGE GENERAL AMPLIFIER APPLICATIONS

COLOR TV CLASS B SOUND OUTPUT APPLICATIONS

- High Voltage : V_{CEO} = 160V

Unit in mm



JEDEC	—
JEITA	—
TOSHIBA	2-8H1A

Weight : 1.4g (Typ.)

MAXIMUM RATINGS (Tc = 25°C)

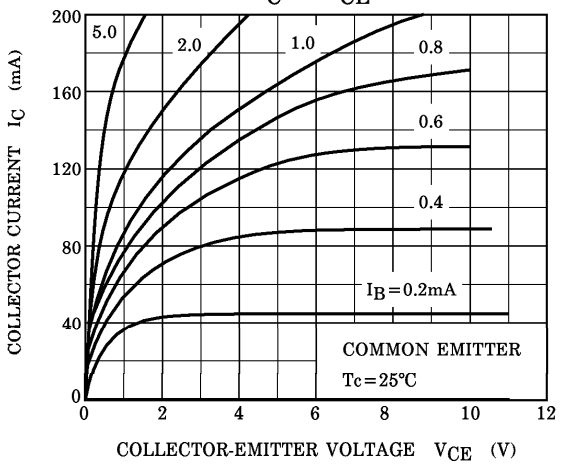
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	200	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	200	mA
Base Current	I_B	100	mA
Collector Power Dissipation	P_C	1.5	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

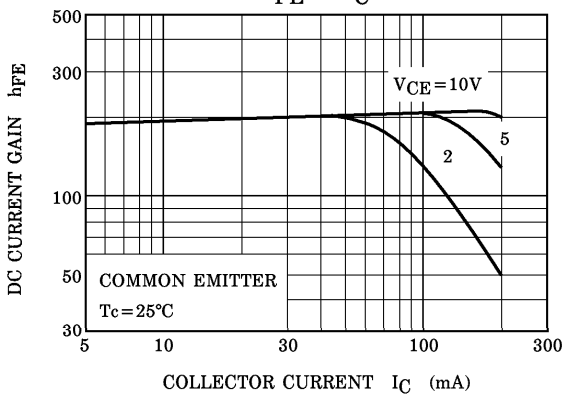
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 200V, I_E = 0	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	0.1	μA
DC Current Gain	h_{FE} (1) (Note)	V_{CE} = 10V, I_C = 50mA	100	—	320	
	h_{FE} (2)	V_{CE} = 10V, I_C = 150mA	80	—	—	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C = 200mA, I_B = 20mA	—	—	1.0	V
Base-Emitter Voltage	V_{BE}	V_{CE} = 10V, I_C = 5mA	0.55	0.65	0.75	V
Transition Frequency	f_T	V_{CE} = 10V, I_C = 50mA	50	—	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	—	10	pF

(Note) : $h_{FE\ (1)}$ Classification O : 100~200, Y : 160~320

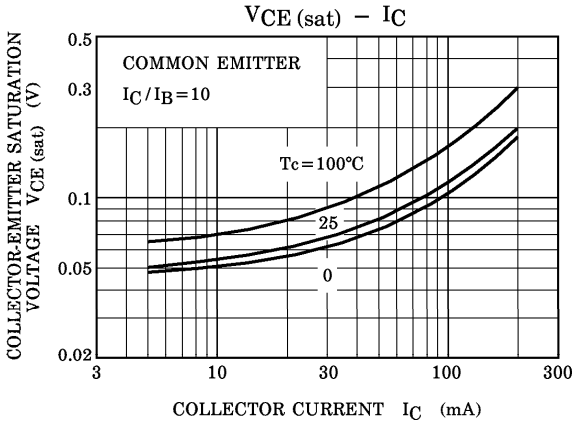
I_C – V_{CE}



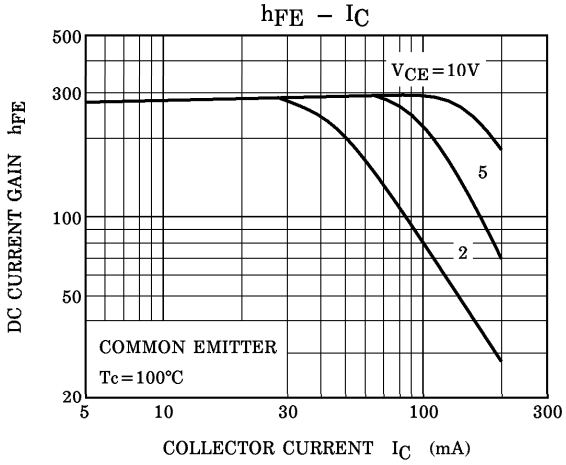
h_{FE} – I_C



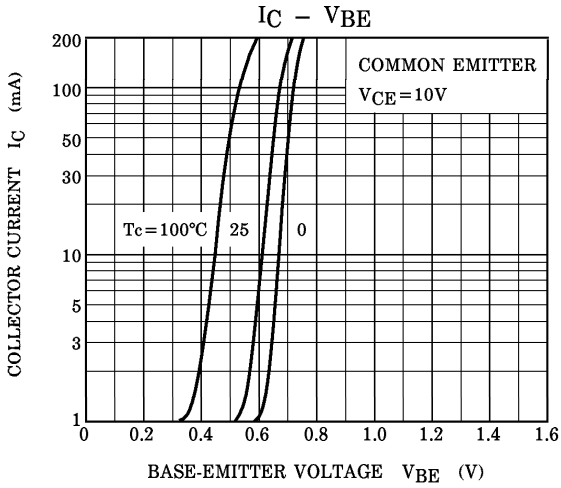
$V_{CE\,(sat)}$ – I_C



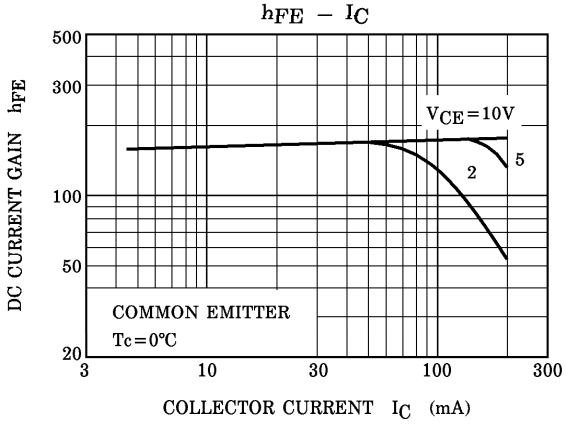
h_{FE} – I_C



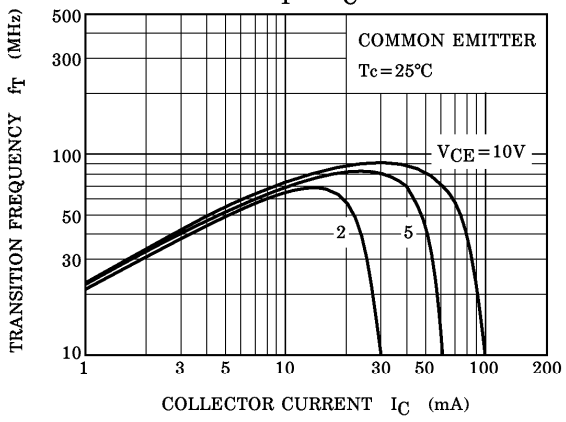
I_C – V_{BE}



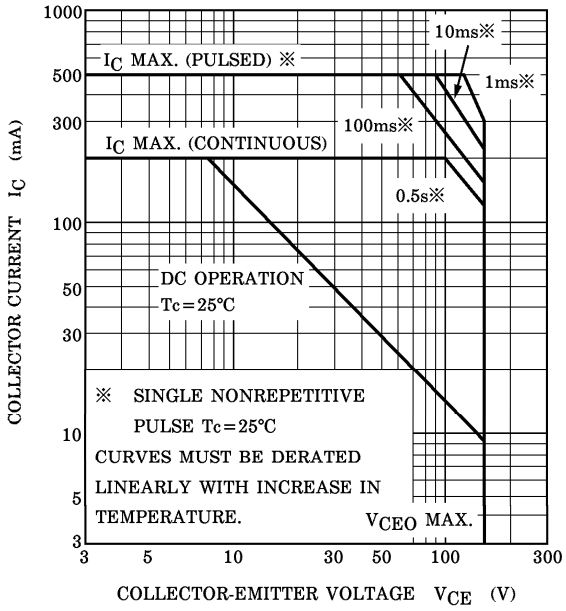
h_{FE} – I_C



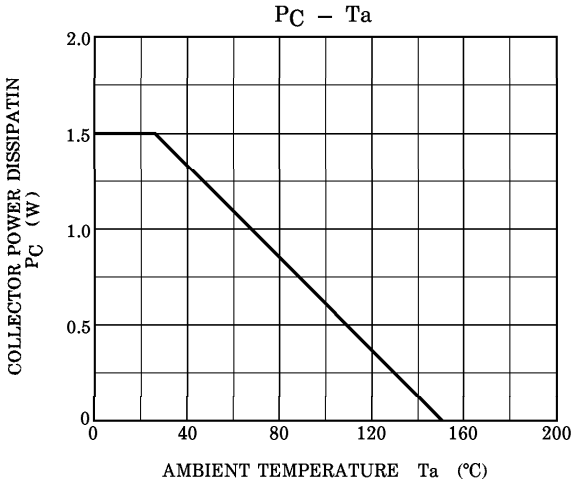
f_T – I_C



SAFE OPERATING AREA



P_C – Ta



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