TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC2229

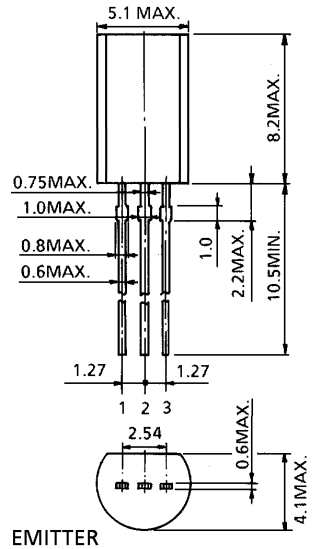
BLACK AND WHITE TV VIDEO OUTPUT APPLICATIONS

HIGH VOLTAGE SWITCHING APPLICATIONS

DRIVER STAGE AUDIO AMPLIFIER APPLICATIONS

- High Breakdown Voltage : V_{CEO} = 150V (Min.)
- Low Output Capacitance : C_{ob} = 5.0pF (Max.)
- High Transition Frequency : f_T = 120MHz (Typ.)

Unit in mm



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92MOD
JEITA	—
TOSHIBA	2-5J1A

Weight : 0.36g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

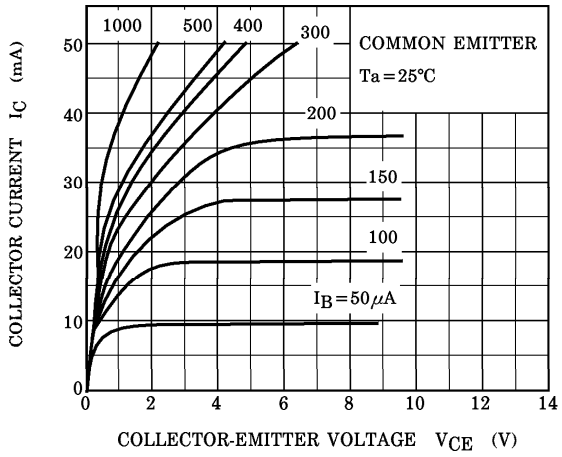
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	200	V
Collector-Emitter Voltage	V_{CEO}	150	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Base Current	I_B	20	mA
Collector Power Dissipation	P_C	800	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

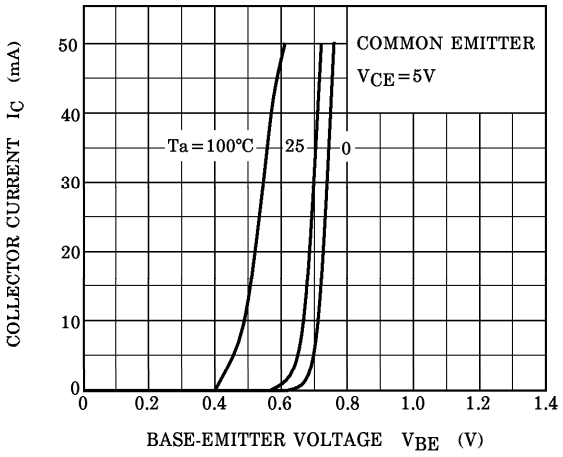
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 200V, I_E = 0	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	0.1	μA
DC Current Gain	h_{FE} (Note)	V_{CE} = 5V, I_C = 10mA	70	—	240	
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C = 10mA, I_B = 1mA	—	—	0.5	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C = 10mA, I_B = 1mA	—	—	1	V
Transition Frequency	f_T	V_{CE} = 30V, I_C = 10mA	—	120	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	3.5	5	pF

(Note) : h_{FE} Classification O : 70~140, Y : 120~240

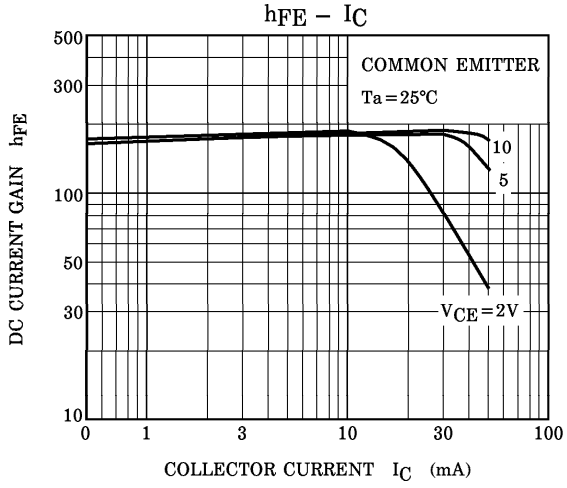
$I_C - V_{CE}$



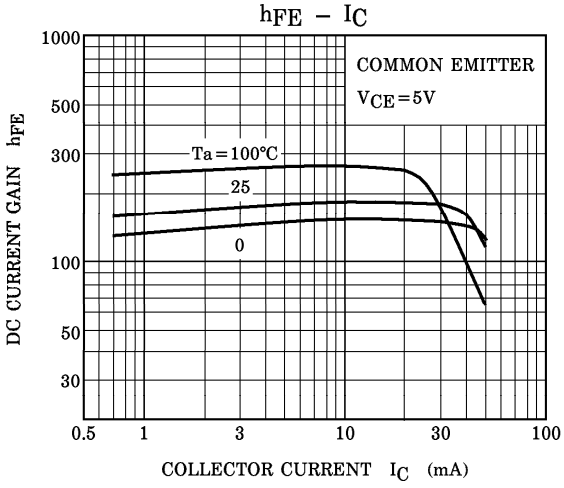
$I_C - V_{BE}$



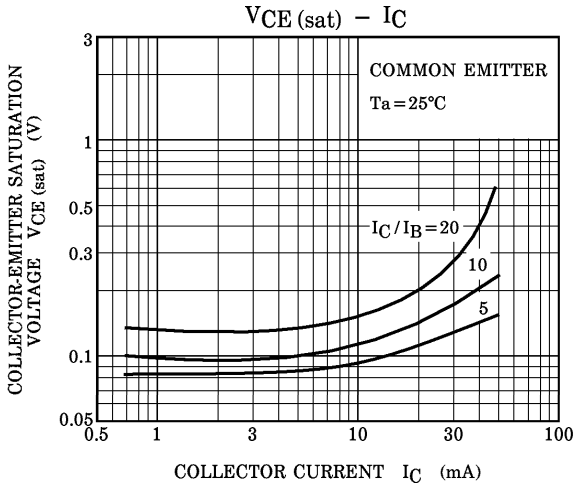
$h_{FE} - I_C$



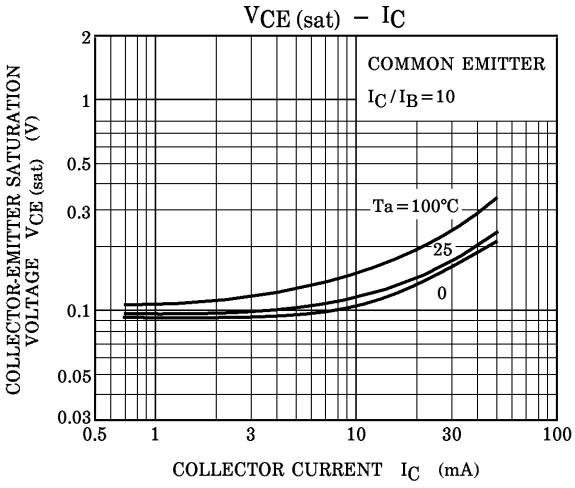
$h_{FE} - I_C$



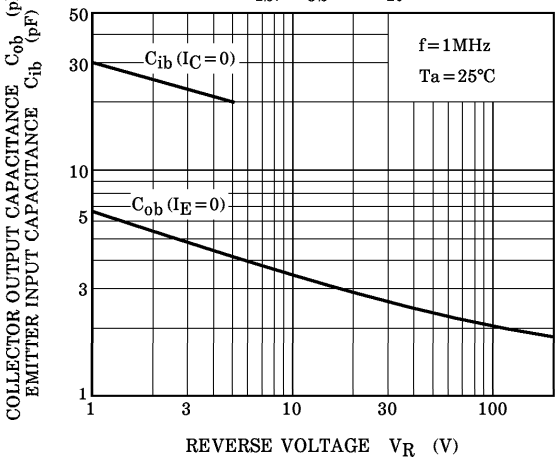
$V_{CE\,(sat)} - I_C$



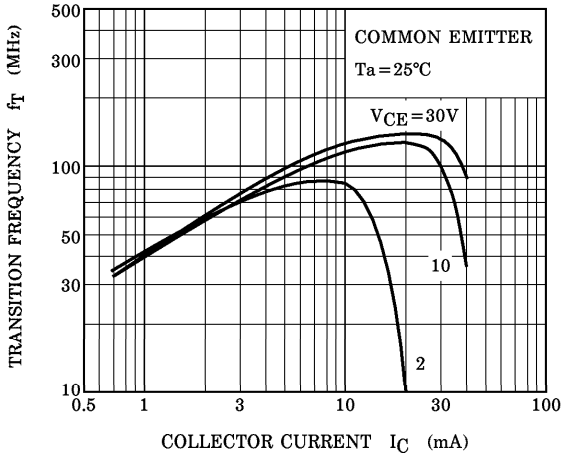
$V_{CE\,(sat)} - I_C$



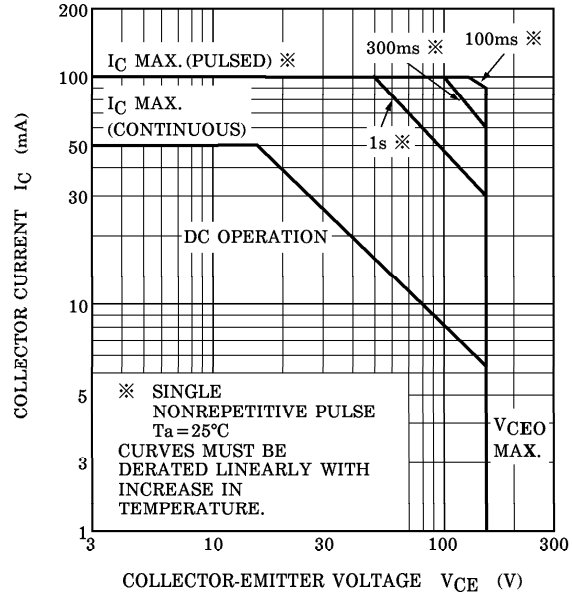
C_{ib}, C_{ob} – V_R



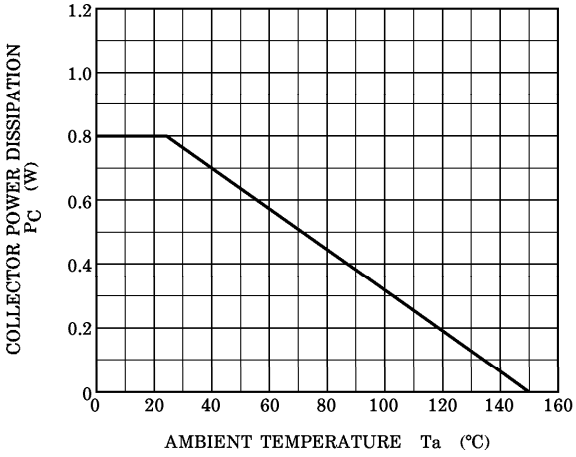
f_T – I_C



SAFE OPERATING AREA



P_C – Ta



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