

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

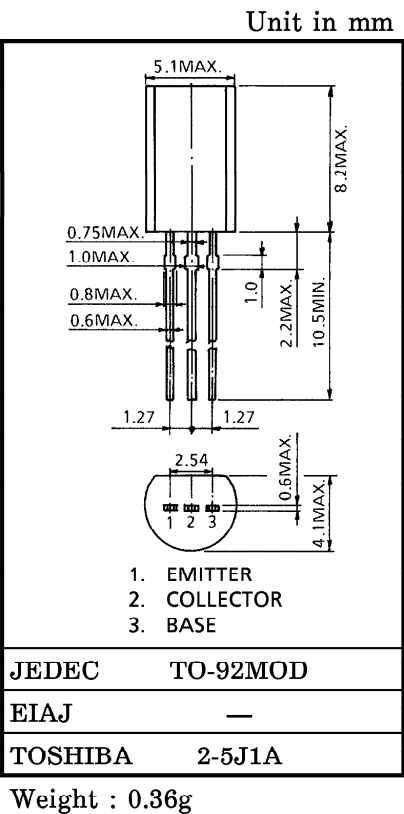
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BLACK AND WHITE TV VIDEO OUTPUT APPLICATIONS.
HIGH VOLTAGE SWITCHING APPLICATIONS.
DRIVER STAGE AUDIO AMPLIFIER APPLICATIONS.

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

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



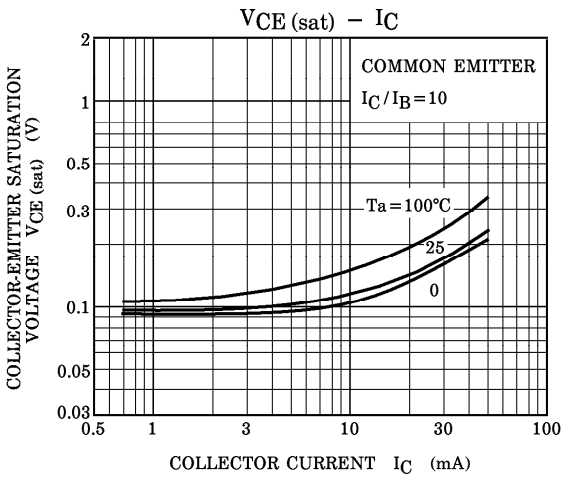
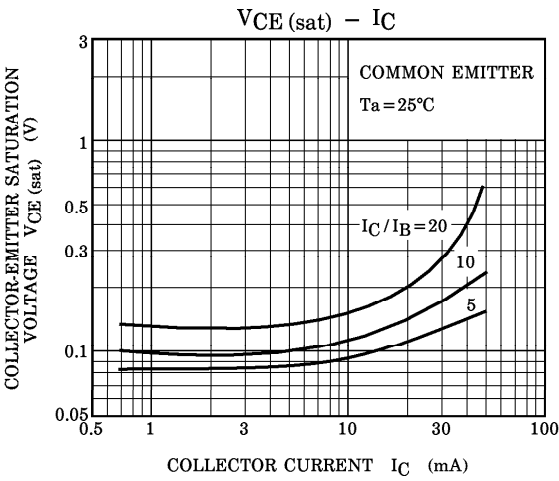
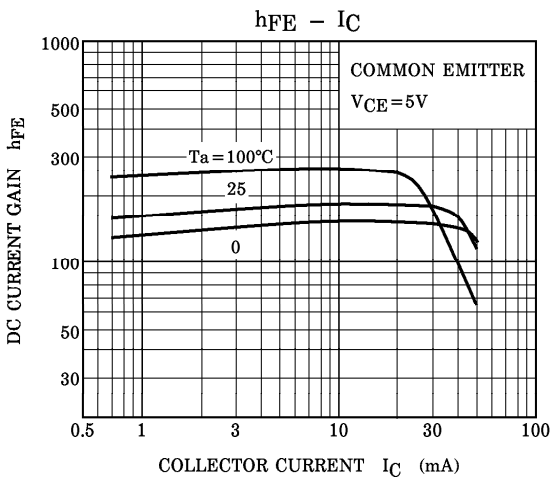
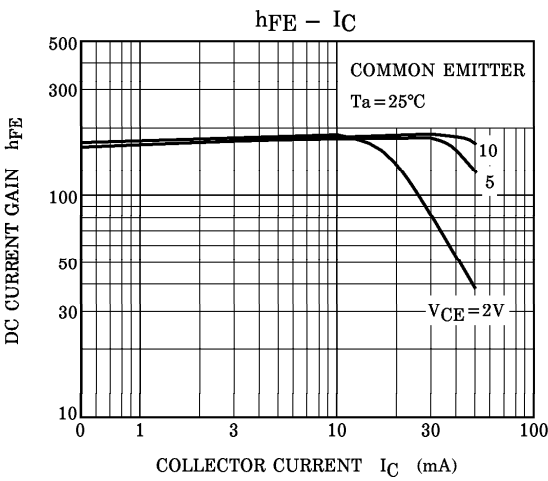
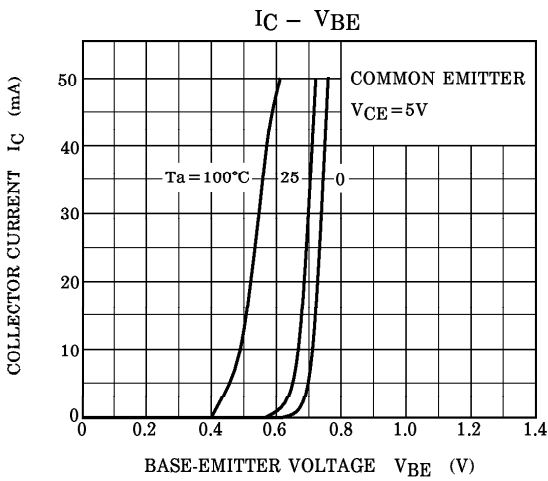
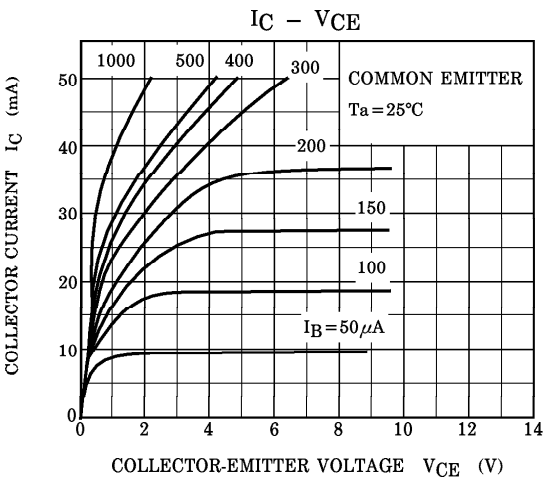
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

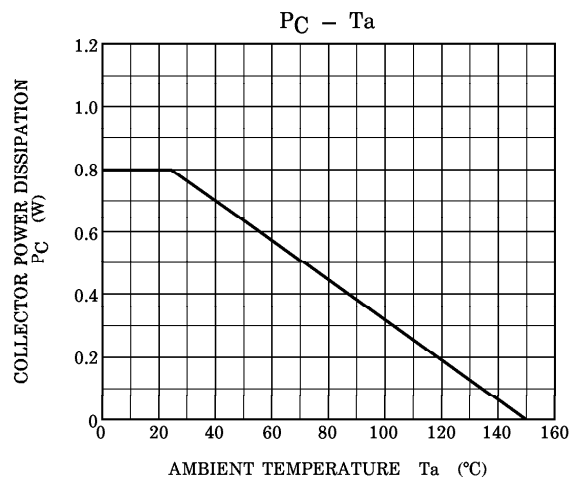
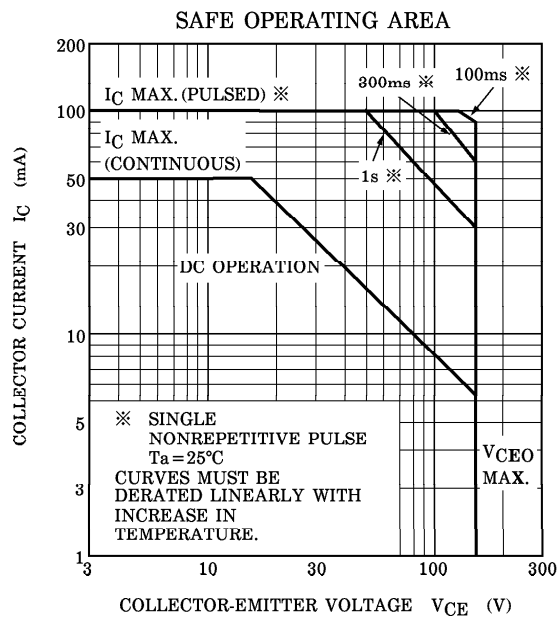
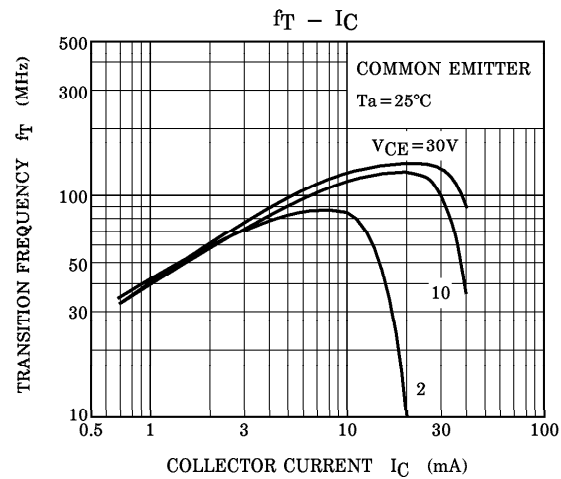
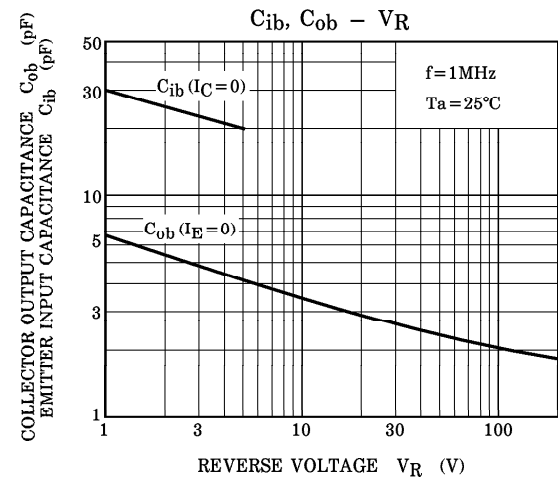
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=200V, I_E=0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	—	—	0.1	μA
DC Current Gain	h_{FE} (Note)	$V_{CE}=5V, I_C=10mA$	70	—	240	
Collector-Emitter Saturation Voltage	V_{CE} (sat)	$I_C=10mA, I_B=1mA$	—	—	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

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