

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2551

HORIZONTAL DEFLECTION OUTPUT FOR COLOR TV

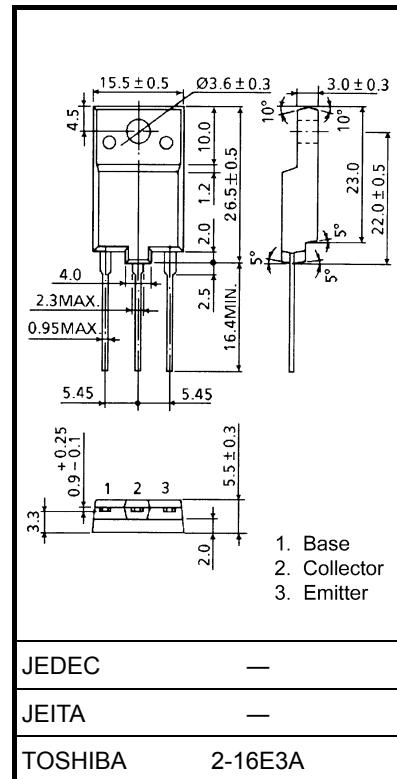
Unit: mm

- High Voltage : $V_{CBO} = 1700$ V
- Low Saturation Voltage : $V_{CE}(\text{sat}) = 5.0$ V (Max.)
- High Speed : $t_f = 1.0$ μ s (Max.)
- Built-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

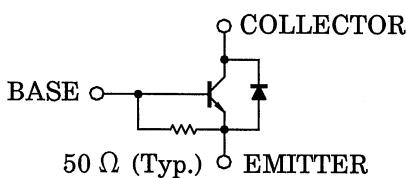
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1700	V
Collector-Emitter Voltage	V_{CEO}	600	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	5
	Pulse	I_{CP}	10
Base Current	I_B	2.5	A
Collector Power Dissipation	P_C	50	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).



Weight: 5.5 g (typ.)

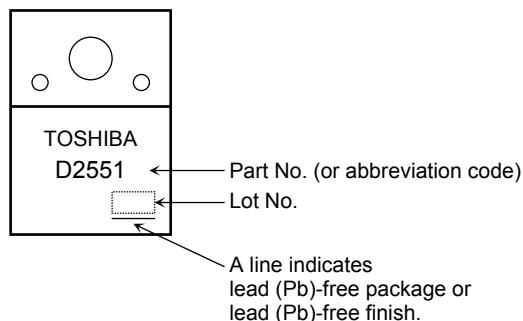
EQUIVALENT CIRCUIT

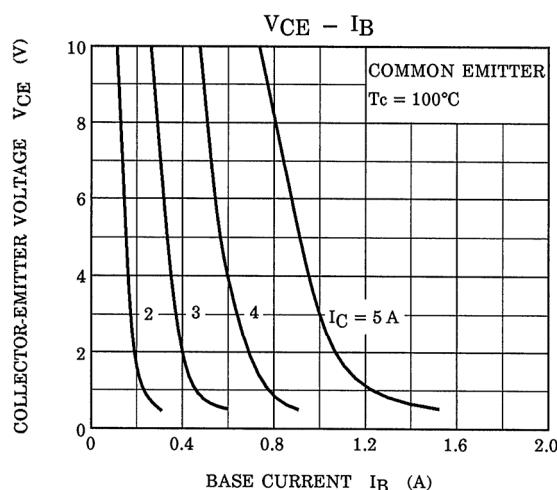
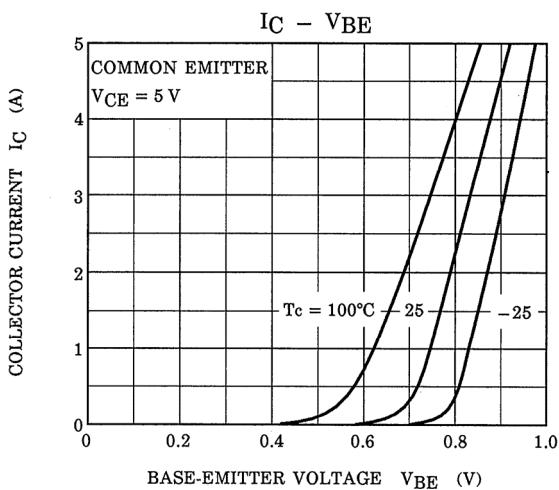
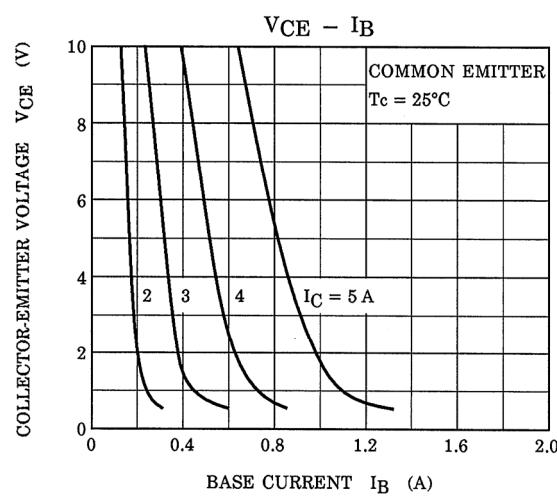
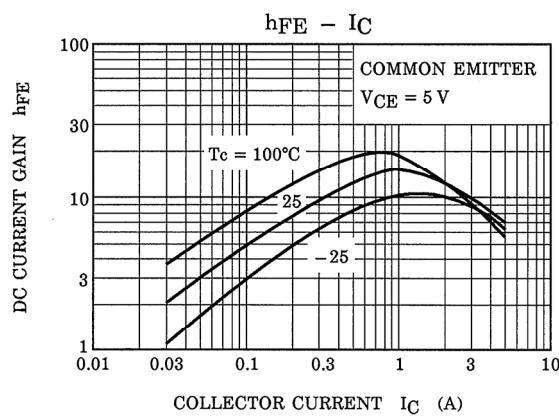
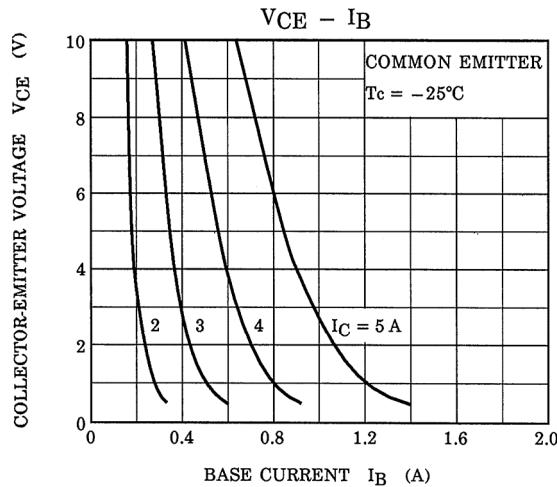
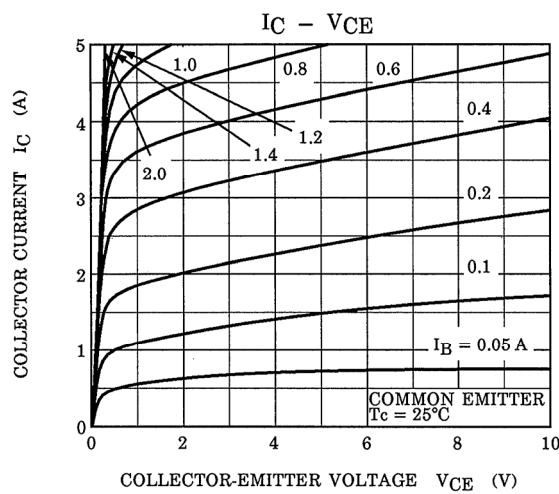


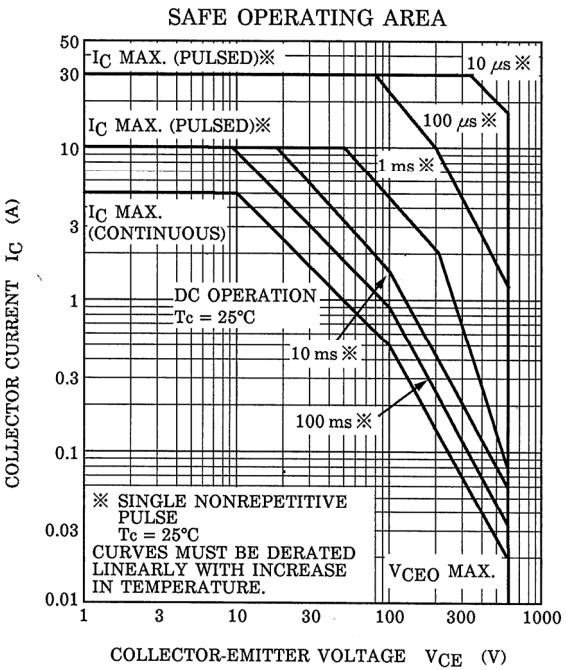
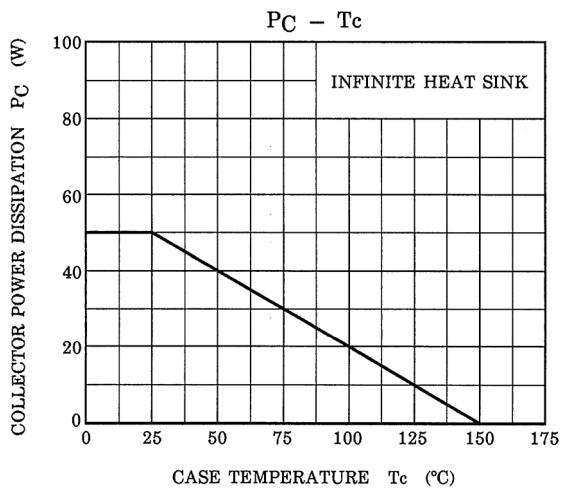
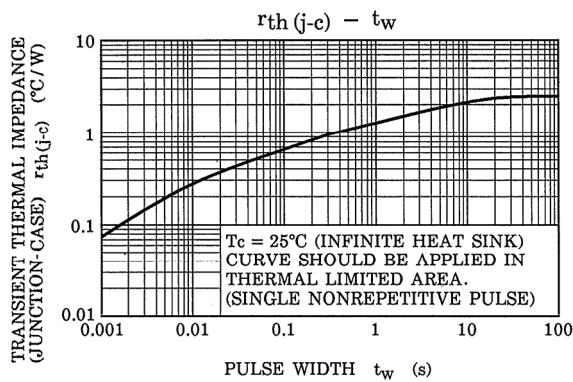
ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1700\text{ V}$, $I_E = 0$	—	—	1	mA	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{ V}$, $I_C = 0$	66	—	200	mA	
Emitter-Base Breakdown Voltage	$V_{(\text{BR})\text{EBO}}$	$I_C = 300\text{ mA}$, $I_B = 0$	5	—	—	V	
DC Current Gain	$\text{h}_{FE}\text{ (1)}$	$V_{CE} = 5\text{ V}$, $I_C = 1\text{ A}$	8	—	28	—	
DC Current Gain	$\text{h}_{FE}\text{ (2)}$	$V_{CE} = 5\text{ V}$, $I_C = 4\text{ A}$	5	—	10	—	
Collector-Emitter Saturation Voltage	$V_{CE\text{ (sat)}}$	$I_C = 4\text{ A}$, $I_B = 0.8\text{ A}$	—	—	5	V	
Base-Emitter Saturation Voltage	$V_{BE\text{ (sat)}}$	$I_C = 4\text{ A}$, $I_B = 0.8\text{ A}$	—	—	1.5	V	
Forward Voltage (Damper Diode)	V_F	$I_F = 5\text{ A}$	—	1.6	2.0	V	
Transition Frequency	f_T	$V_{CE} = 10\text{ V}$, $I_C = 0.1\text{ A}$	—	3	—	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$	—	125	—	pF	
Switching Time	Storage Time	t_{stg}	$I_{CP} = 4\text{ A}$, $I_{B1\text{ (end)}} = 0.8\text{ A}$ $f_H = 15.75\text{ kHz}$	—	7.5	10	μs
	Fall Time	t_f		—	0.5	1.0	

MARKING







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20070701-EN

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