

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5404

HORIZONTAL DEFLECTION OUTPUT FOR HIGH RESOLUTION

DISPLAY, COLOR TV

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : V_{CB0} = 1500 V
- Low Saturation Voltage : V_{CE (sat)} = 3 V (Max.)
- High Speed : t_f = 0.15 μs (Typ.)
- Collector Metal (Fin) is Fully Covered with Mold Resin.

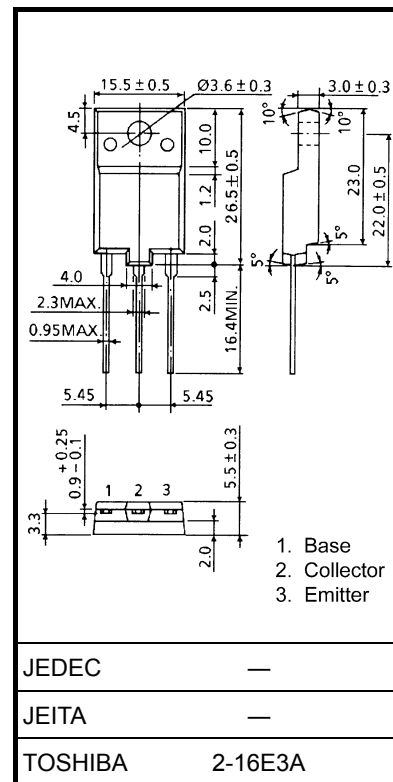
ABSOLUTE MAXIMUM RATINGS (T_c = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	1500	V
Collector-Emitter Voltage		V_{CEO}	600	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	9	A
	Pulse	I_{CP}	18	
Base Current		I_B	4.5	A
Collector Power Dissipation		P_C	50	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°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).

Unit: mm

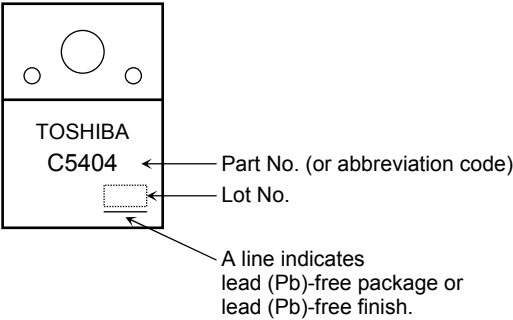


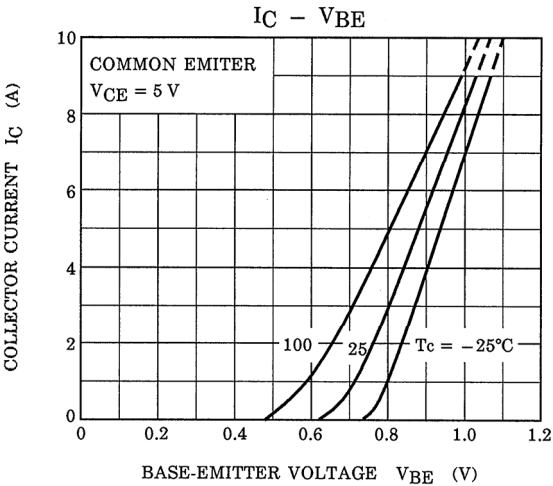
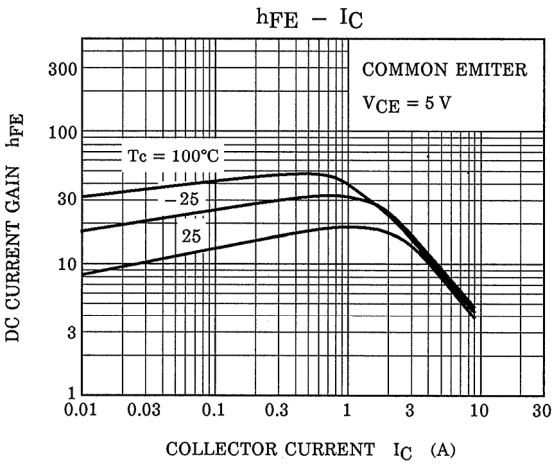
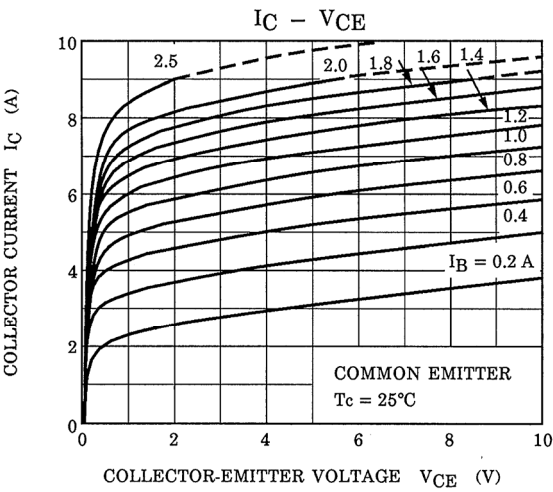
Weight: 5.5 g (typ.)

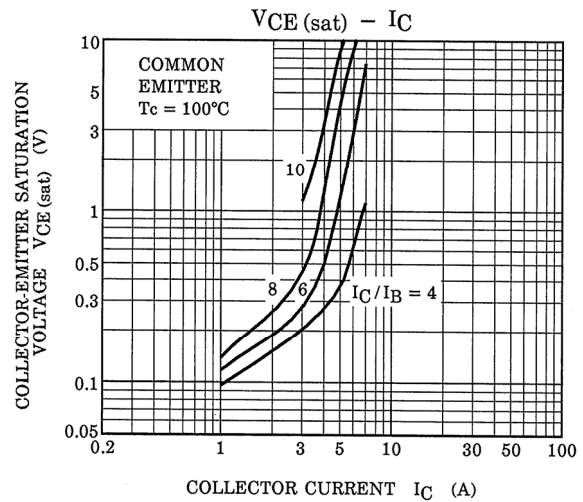
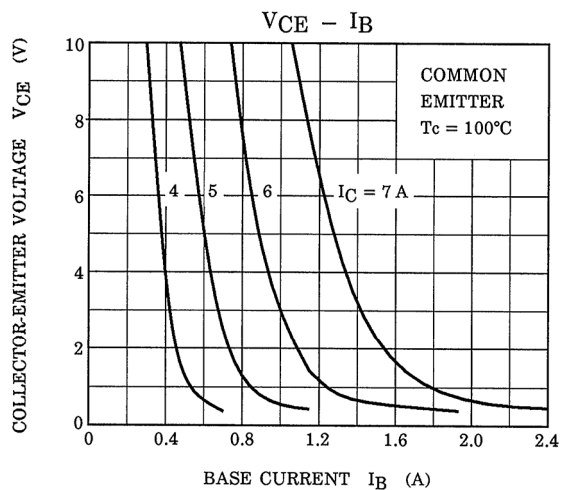
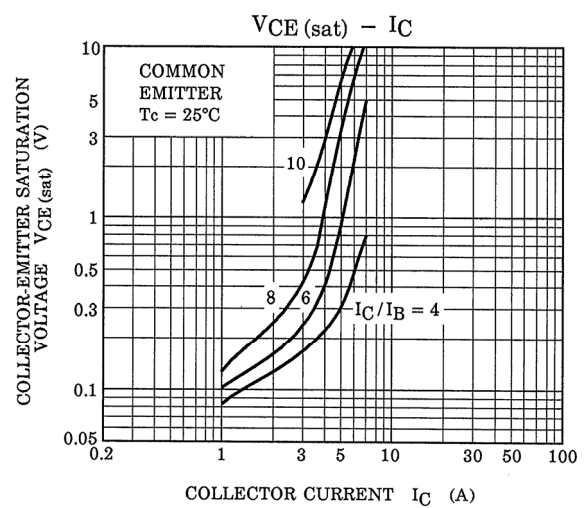
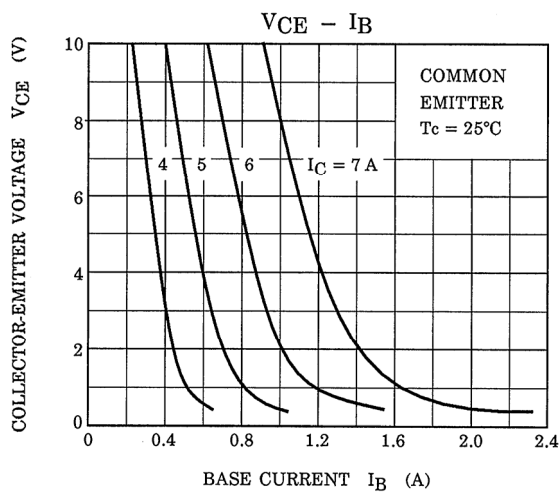
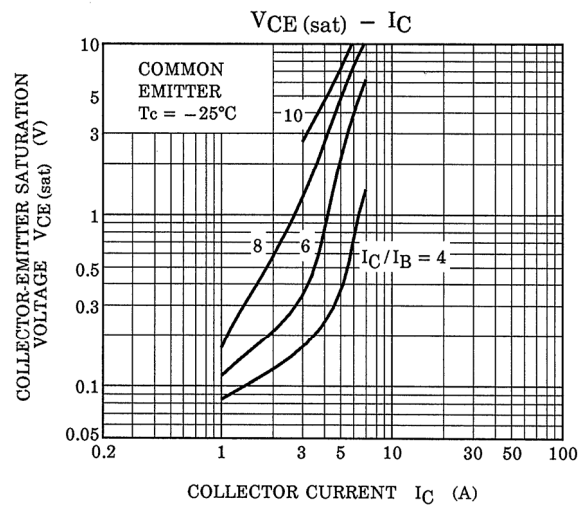
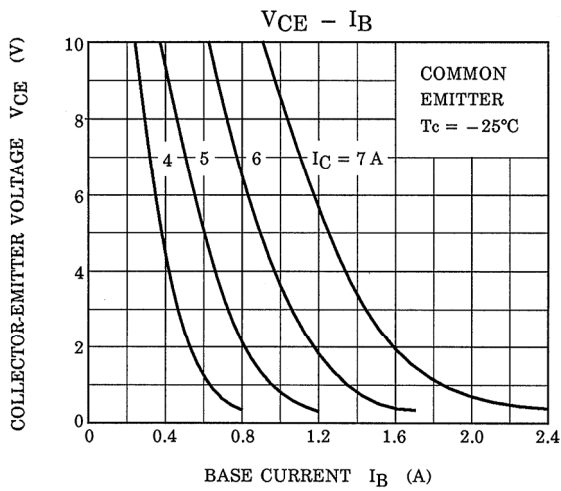
ELECTRICAL CHARACTERISTICS (Tc = 25°C)

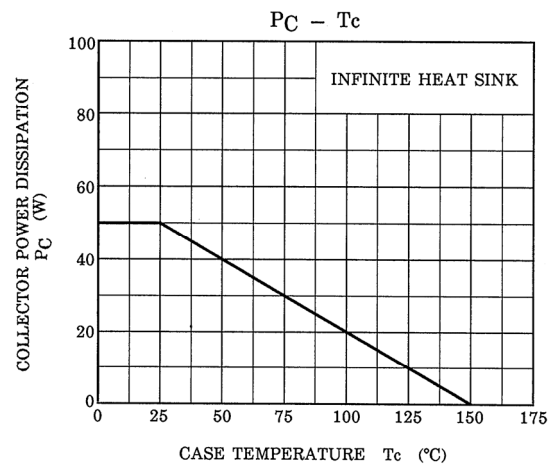
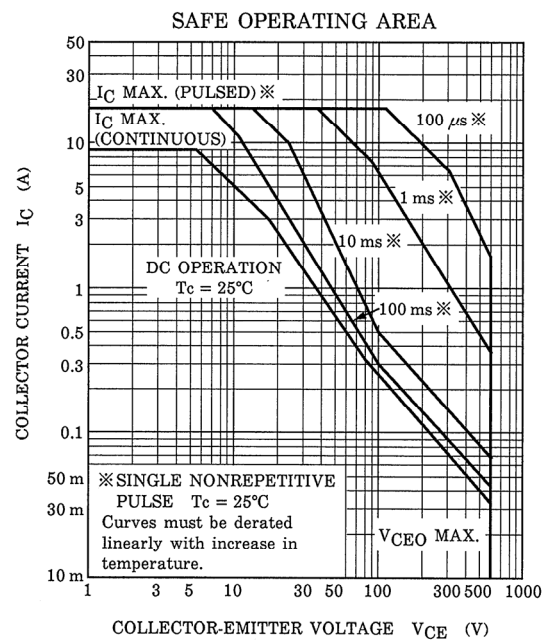
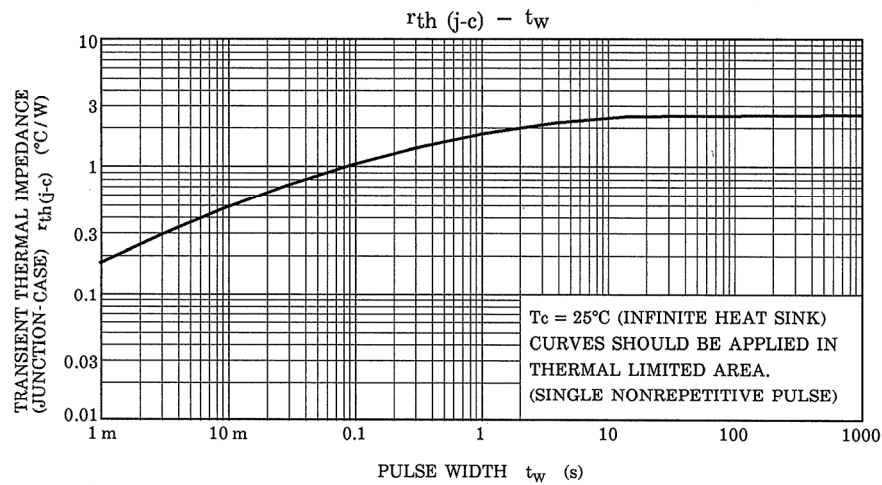
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 1500 V, I _E = 0	—	—	1	mA
Emitter Cut-off Current		IEBO	V _{EB} = 5 V, I _C = 0	—	—	10	μA
Emitter-Base Breakdown Voltage		V (BR) CEO	I _C = 10 mA, I _B = 0	600	—	—	V
DC Current Gain	h _{FE} (1)		V _{CE} = 5 V, I _C = 1 A	10	—	40	—
	h _{FE} (2)		V _{CE} = 5 V, I _C = 7 A	4	—	8	
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I _C = 7 A, I _B = 1.75 A	—	—	3	V
Base-Emitter Saturation Voltage		V _{BE} (sat)	I _C = 7 A, I _B = 1.75 A	—	1.0	1.5	V
Transition Frequency		f _T	V _{CE} = 10 V, I _C = 0.1 A	—	2.5	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	115	—	pF
Switching Time	Storage Time	t _{stg}	I _{CP} = 5.5 A, I _{B1} (end) = 1.1 A f _H = 64 kHz	—	2.5	3.5	μs
	Fall Time	t _f		—	0.15	0.3	

Marking









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20070701-EN

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