

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5570

HORIZONTAL DEFLECTION OUTPUT FOR HIGH RESOLUTION

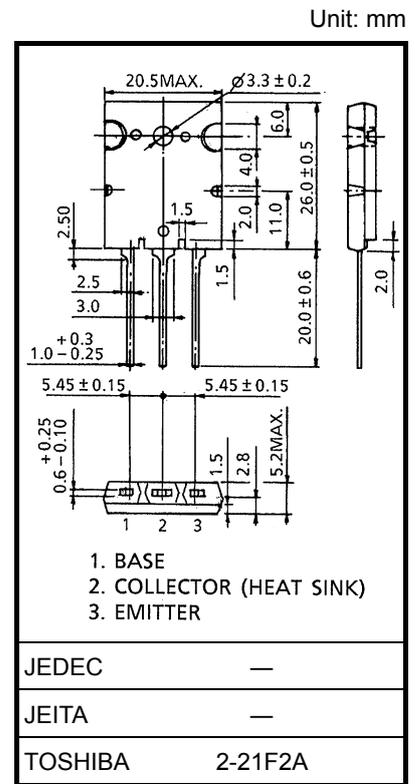
DISPLAY, COLOR TV

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage: $V_{CBO} = 1700\text{ V}$
- Low Saturation Voltage: $V_{CE(sat)} = 3\text{ V (Max.)}$
- High Speed: $t_f(2) = 0.1\ \mu\text{s (Typ.)}$

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}	800	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	28	A
	Pulse	I_{CP}	56	
Base Current		I_B	14	A
Collector Power Dissipation		P_C	220	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$



Weight: 9.75 g (typ.)

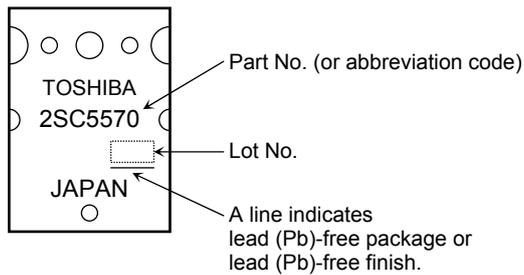
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

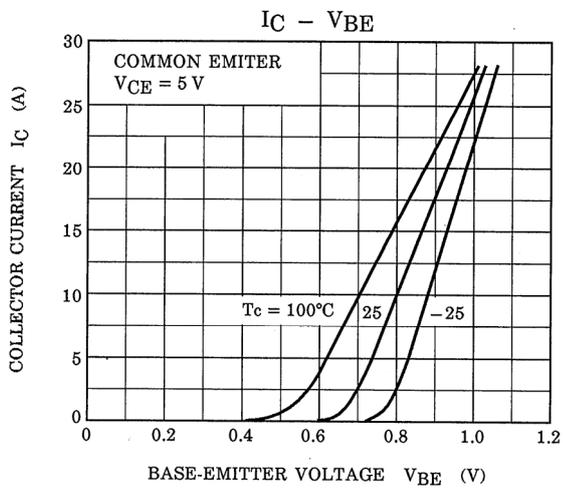
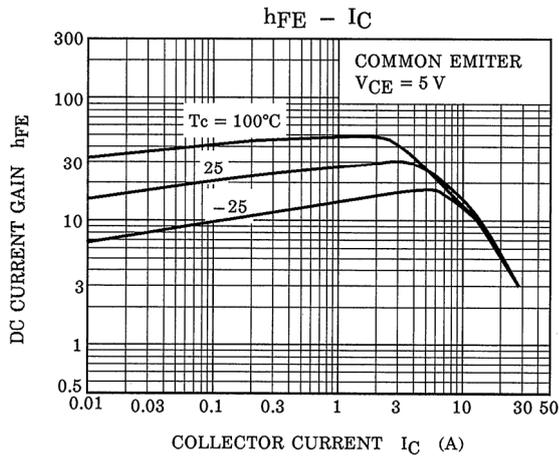
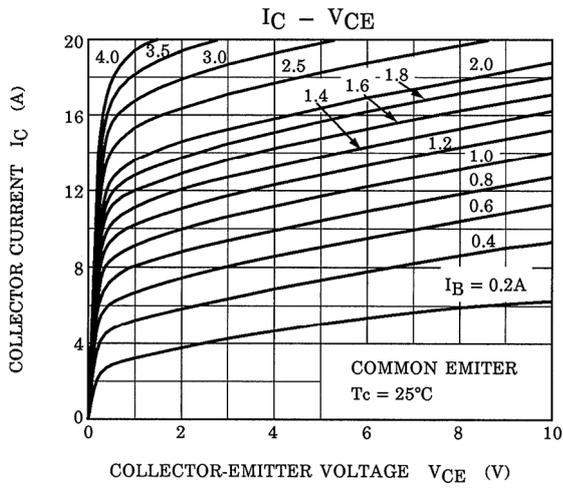
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

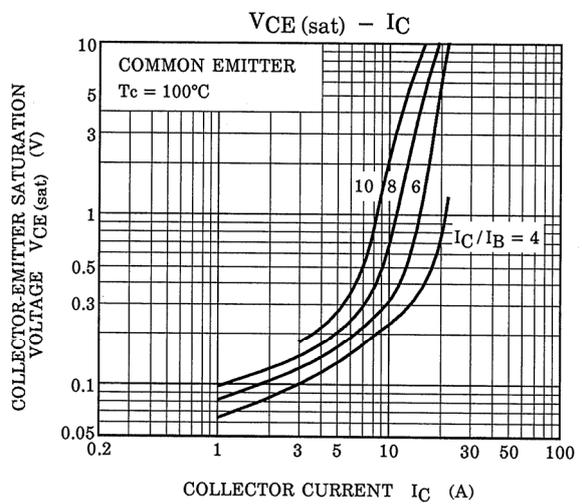
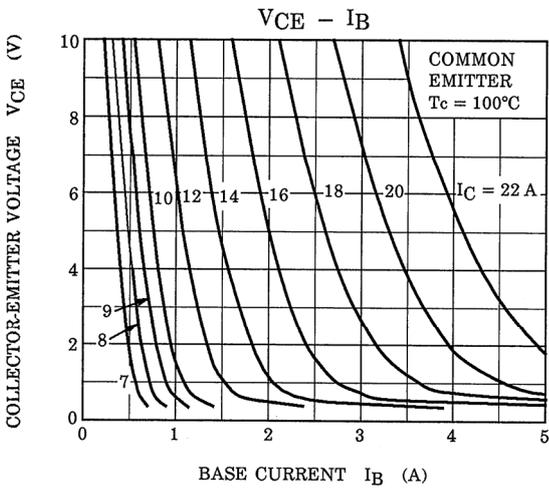
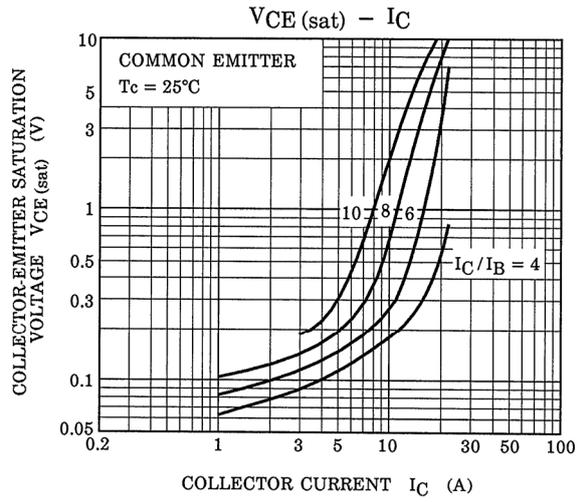
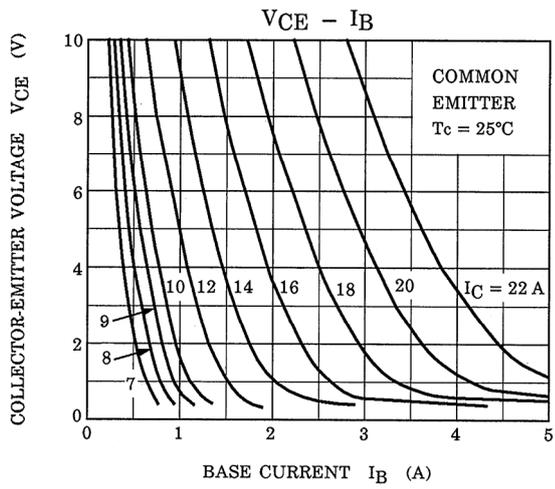
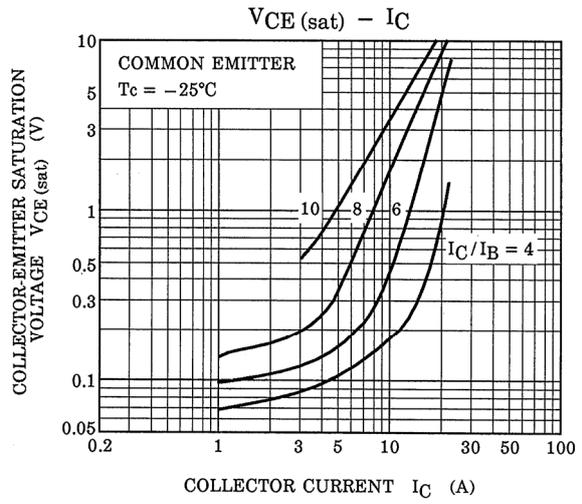
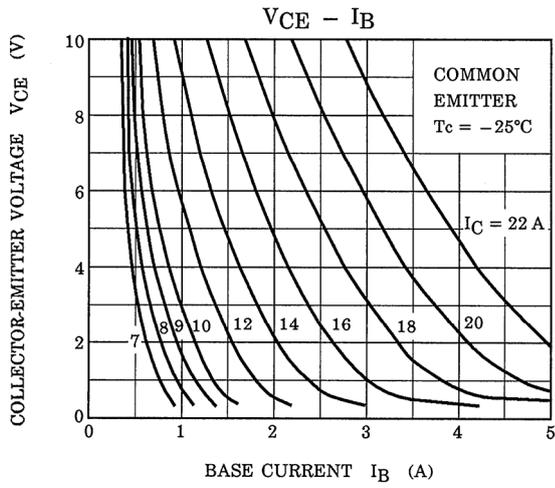
ELECTRICAL CHARACTERISTICS (T_c = 25°C)

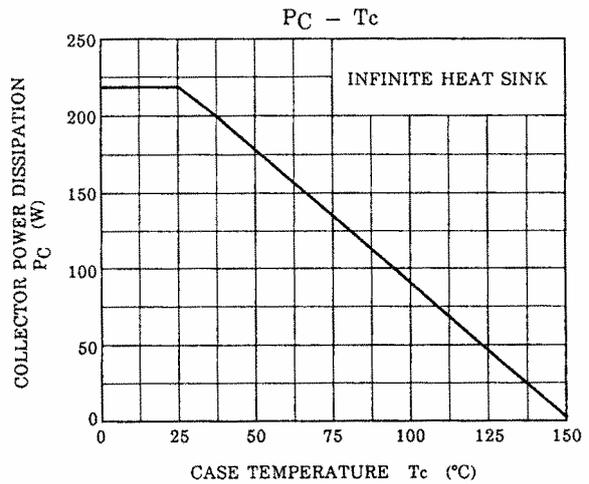
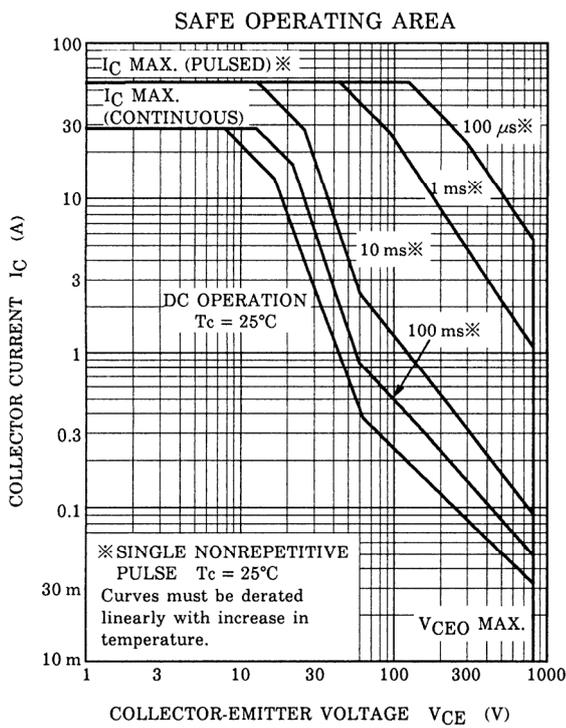
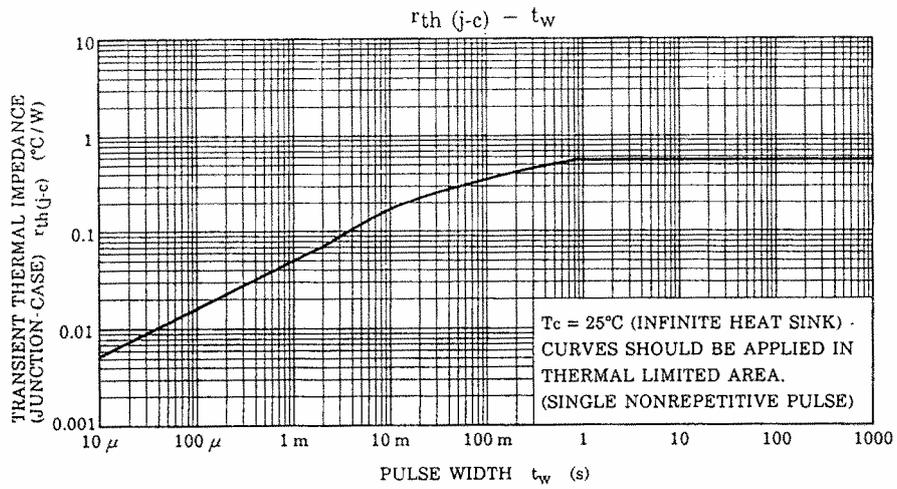
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} = 1700 V, I _E = 0	—	—	1	mA
Emitter Cut-off Current		I _{EBO}	V _{EB} = 5 V, I _C = 0	—	—	100	μA
Emitter-Base Breakdown Voltage		V _{(BR) CEO}	I _C = 10 mA, I _B = 0	800	—	—	V
DC Current Gain	h _{FE} (1)		V _{CE} = 5 V, I _C = 2 A	22	—	48	—
	h _{FE} (2)		V _{CE} = 5 V, I _C = 8 A	12.5	—	25	
	h _{FE} (3)		V _{CE} = 5 V, I _C = 22 A	4.5	—	7.5	
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 22 A, I _B = 5.5 A	—	—	3	V
Base-Emitter Saturation Voltage		V _{BE (sat)}	I _C = 22 A, I _B = 5.5 A	—	1.0	1.5	V
Transition Frequency		f _T	V _{CE} = 10 V, I _C = 0.1 A	—	2	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	470	—	pF
Switching Time	Storage Time	t _{stg} (1)	I _{CP} = 10 A, I _{B1} (end) = 1.4 A f _H = 64 kHz	—	2.6	3.0	μs
	Fall Time	t _f (1)		—	0.2	0.3	
	Storage Time	t _{stg} (2)	I _{CP} = 8 A, I _{B1} (end) = 1.2 A f _H = 130 kHz	—	1.4	1.6	μs
	Fall Time	t _f (2)		—	0.10	0.15	

Marking









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20070701-EN

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