

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5445

HORIZONTAL DEFLECTION OUTPUT FOR HIGH RESOLUTION

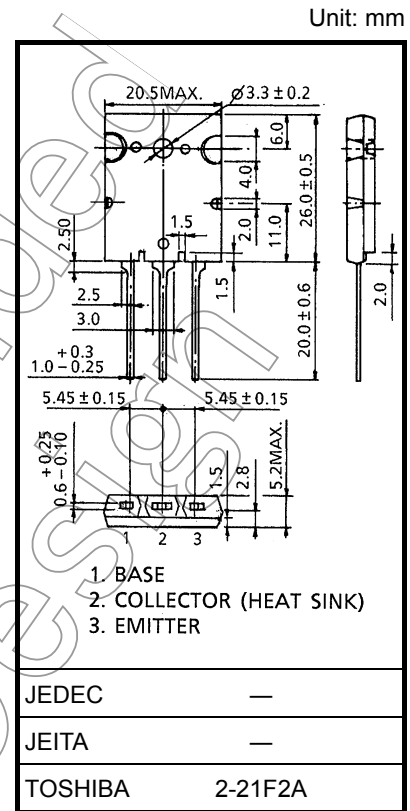
DISPLAY, COLOR TV

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CBO} = 1500\text{ V}$
- 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}	1500	V
Collector-Emitter Voltage		V_{CEO}	600	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	20	A
	Pulse	I_{CP}	40	
Base Current		I_B	10	A
Collector Power Dissipation		P_C	200	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$



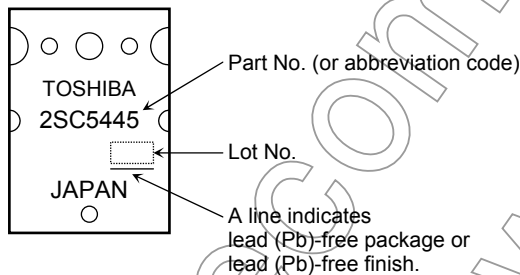
Weight: 9.75 g (typ.)

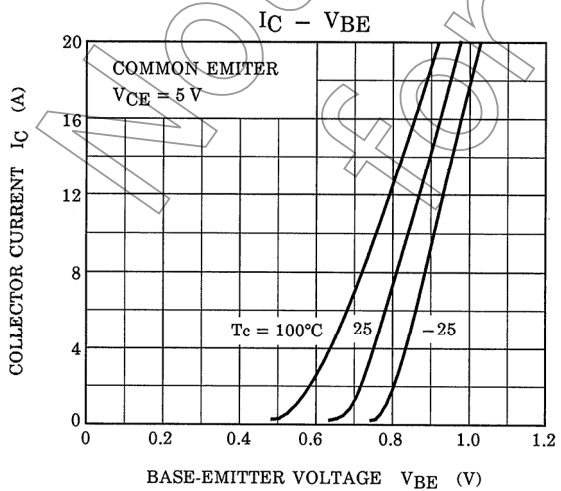
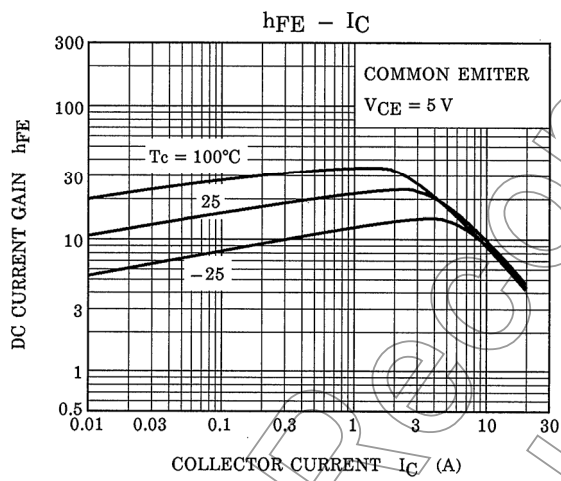
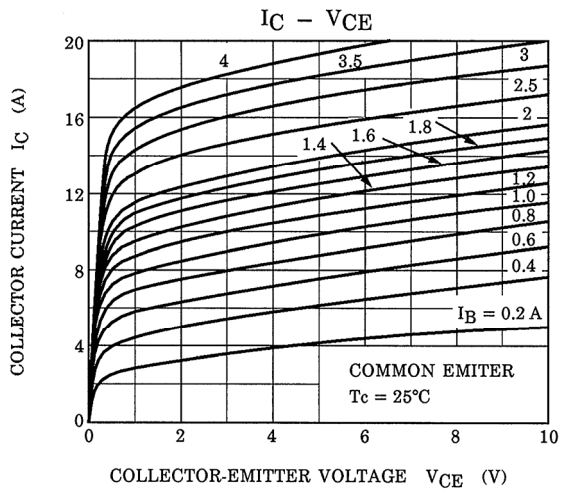
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

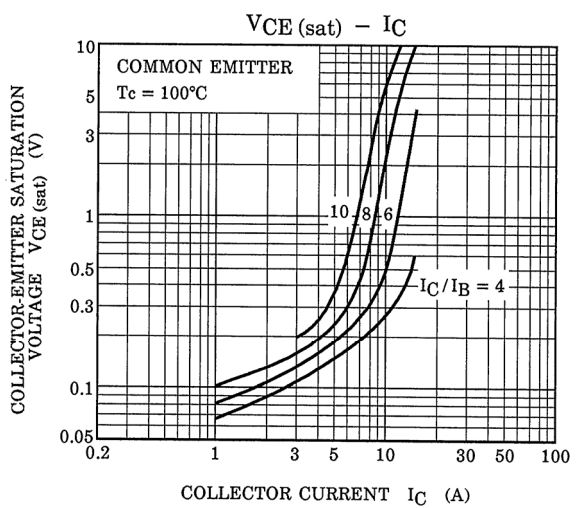
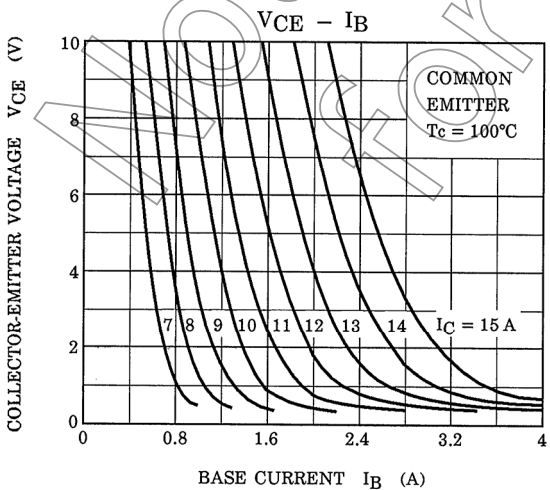
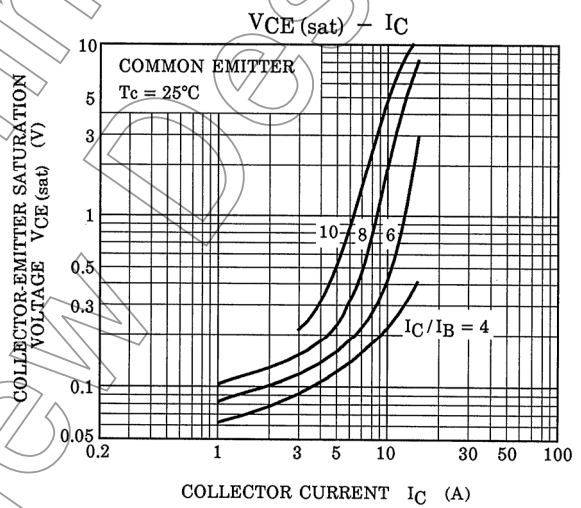
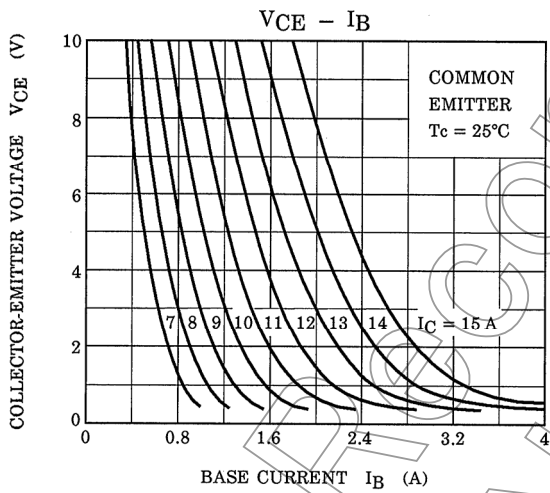
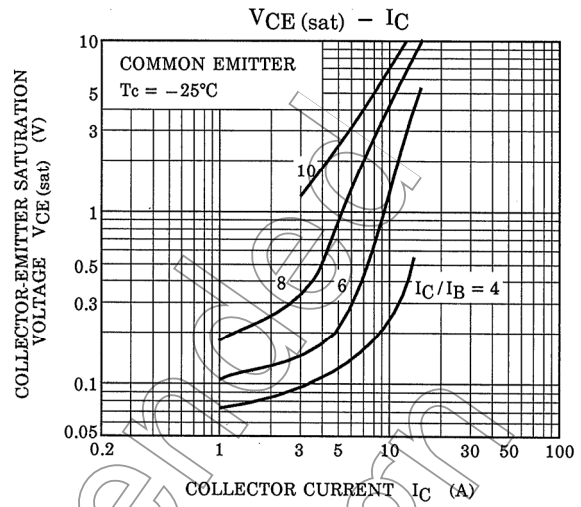
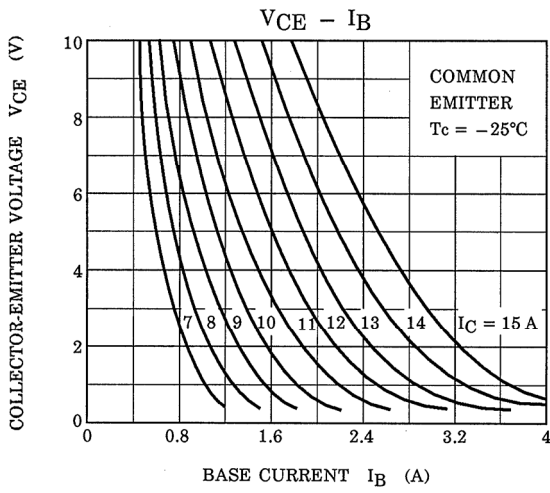
ELECTRICAL CHARACTERISTICS (T_c = 25°C)

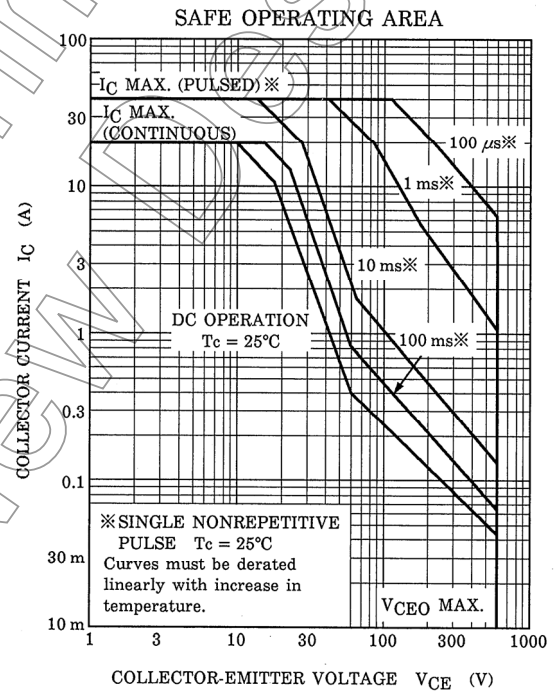
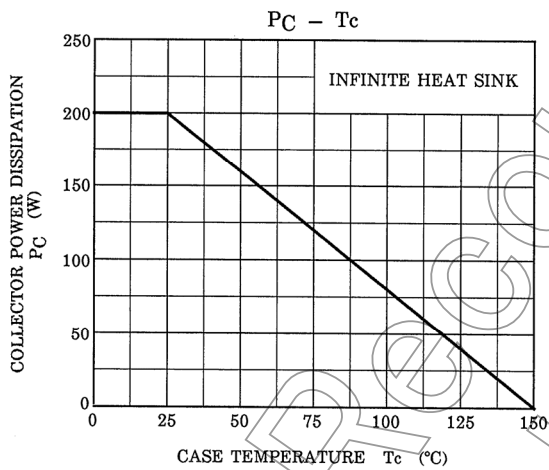
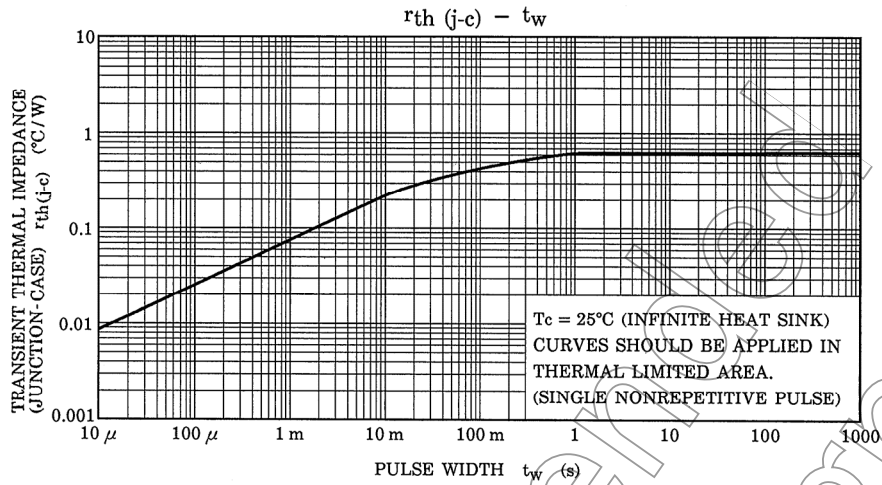
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current		I _{CB0}	V _{CB} = 1500 V, I _E = 0	—	—	1	mA
Emitter Cut-off Current		I _{EB0}	V _{EB} = 5 V, I _C = 0	—	—	10	μA
Emitter-Base Breakdown Voltage		V _{(BR) CEO}	I _C = 10 mA, I _B = 0	600	—	—	V
DC Current Gain	h _{FE} (1)		V _{CE} = 5 V, I _C = 2 A	10	—	40	—
	h _{FE} (2)		V _{CE} = 5 V, I _C = 10 A	7	—	14.5	
	h _{FE} (3)		V _{CE} = 5 V, I _C = 15 A	4.5	—	8.5	
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 15 A, I _B = 3.75 A	—	—	3	V
Base-Emitter Saturation Voltage		V _{BE (sat)}	I _C = 15 A, I _B = 3.75 A	—	1.0	1.5	V
Transition Frequency		f _T	V _{CE} = 10 V, I _C = 0.1 A	—	1.7	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	290	—	pF
Switching Time	Storage Time	t _{stg} (1)	I _{CP} = 10 A, I _{B1} (end) = 1.7 A f _H = 64 kHz	—	2.5	3.5	μs
	Fall Time	t _f (1)		—	0.12	0.3	
	Storage Time	t _{stg} (2)	I _{CP} = 8 A, I _{B1} (end) = 1.4 A f _H = 100 kHz	—	2.0	2.2	μs
	Fall Time	t _f (2)		—	0.10	0.15	

Marking









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20070701-EN

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