

S2055N

COLOR TV HORIZONTAL OUTPUT APPLICATIONS

Unit: mm

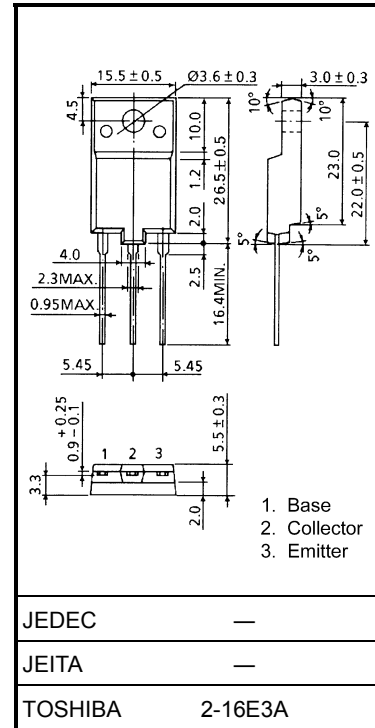
- High Voltage : $V_{CES} = 1500 \text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 5 \text{ V (Max.)}$
- High Speed : $t_f = 0.3 \mu\text{s (Typ.)}$
- Built-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

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

CHARACTERISTICS	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	1500	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	8
	Pulse	I_{CP}	15
Base Current	I_B	4	A
Collector Power Dissipation	P_C	50	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$
Thermal Resistance	$R_{th(j-c)}$	2.5	$^\circ\text{C} / \text{W}$

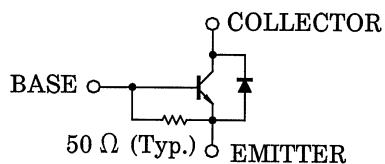
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

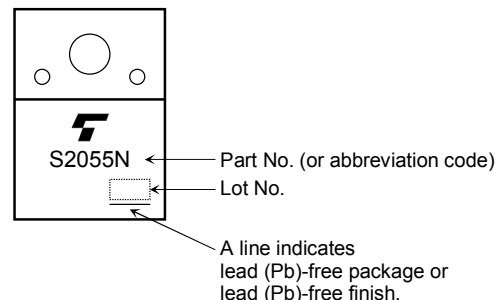


Weight: 5.5 g (typ.)

EQUIVALENT CIRCUIT

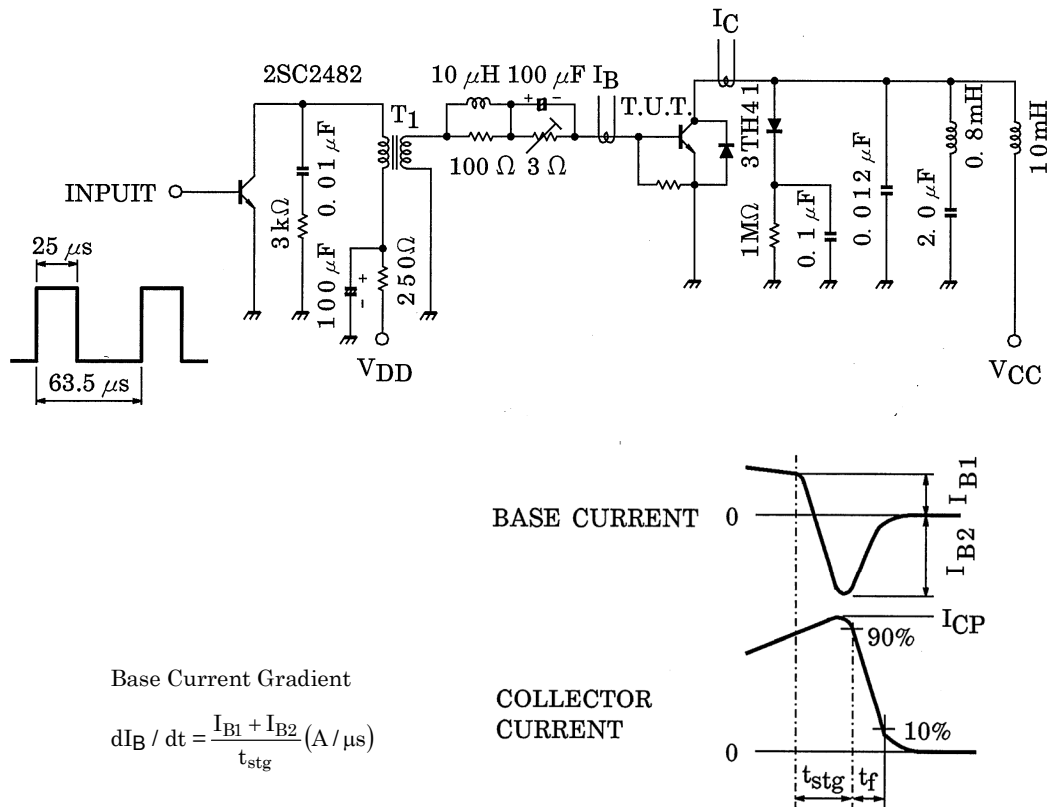


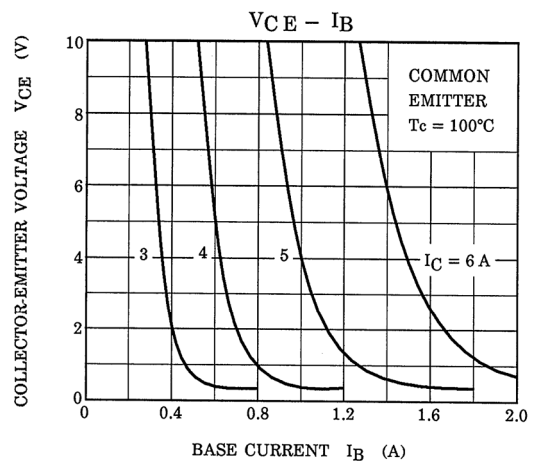
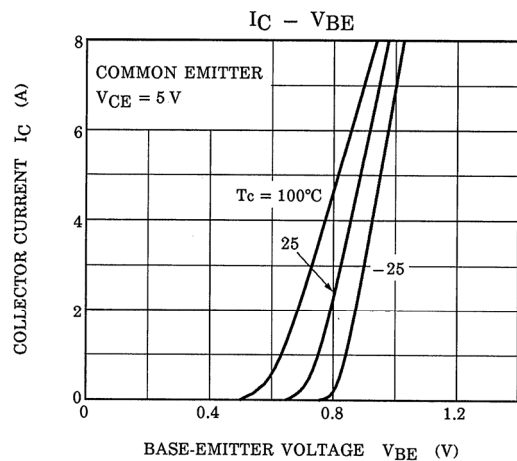
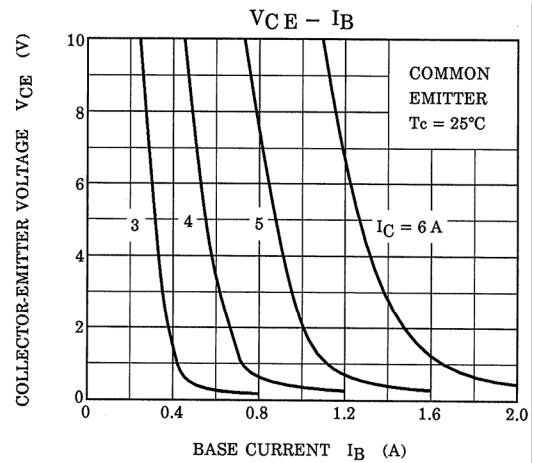
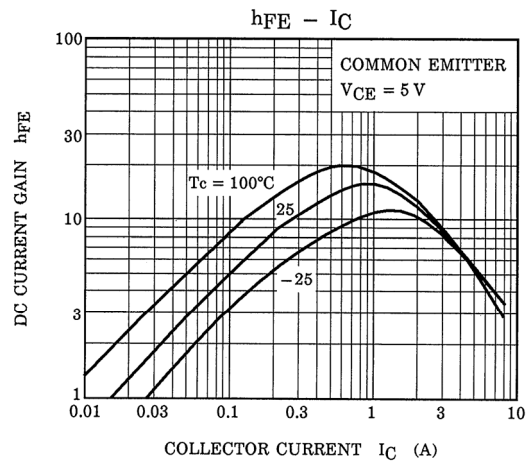
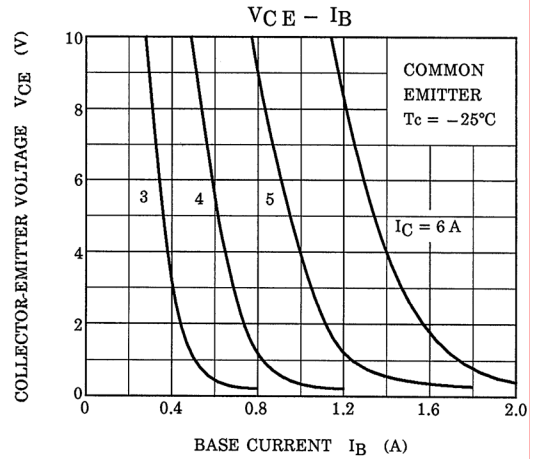
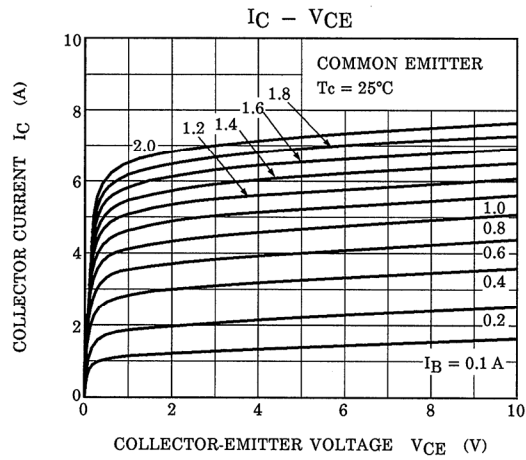
MARKING

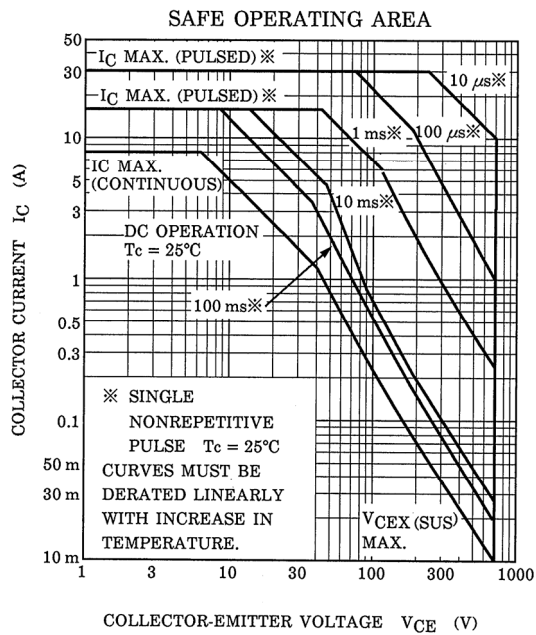
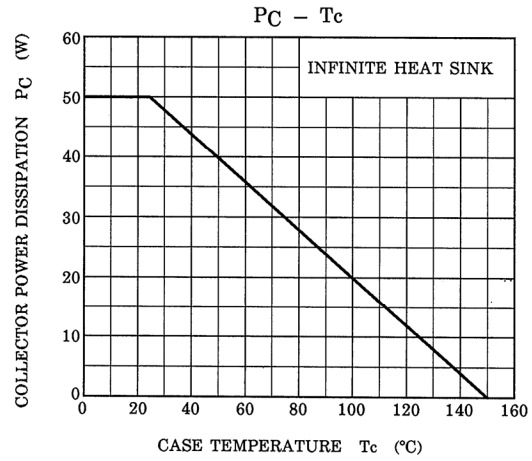
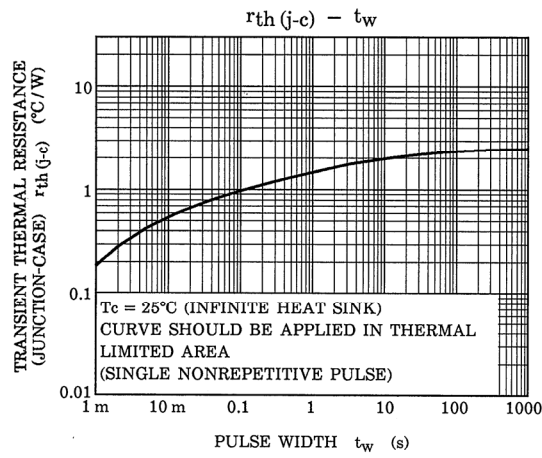


ELECTRICAL CHARACTERISTICS (T_c = 25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} = 1500 V, V _{BE} = 0	—	—	1	mA
Emitter-Base Breakdown Voltage	V _(BR) EBO	I _E = 0.4 A, I _C = 0	5	—	—	V
DC Current Gain	h _{FE} (1)	V _{CE} = 5 V, I _C = 1 A	8	—	25	—
	h _{FE} (2)	V _{CE} = 5 V, I _C = 4.5 A	4.5	—	9	
Collector-Emitter Saturation Voltage	V _{CE} (sat)	I _C = 4.5 A, I _B = 2 A	—	—	1	V
		I _C = 4.5 A, I _B = 1 A	—	—	5	
Base-Emitter Saturation Voltage	V _{BE} (sat)	I _C = 4.5 A, I _B = 1 A	—	0.9	1.2	V
Forward Voltage(Damper Diode)	V _F	I _F = 6 A	—	1.6	2.0	V
Collector-Emitter Sustain Voltage	V _{CEX} (sus)	L = 40 mH, I _C = 0.5 A V _{BE} = -1.7 V	700	—	—	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	—	95	—	pF
Switching Time (Fig. 1)	Storage Time	I _{CP} = 4.5 A, I _{B1} (end) = 1 A f _H = 15.75 kHz	—	7.5	11	μs
	Fall Time		—	0.3	0.6	







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