

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5858

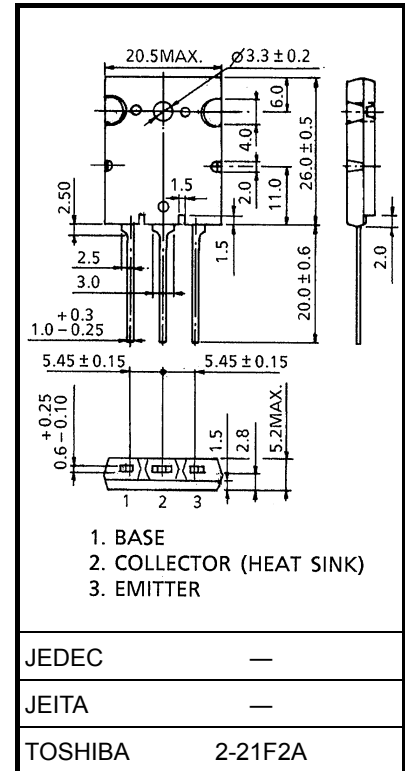
HORIZONTAL DEFLECTION OUTPUT FOR
HDTV, DIGITAL TV, PROJECTION TV

Unit: mm

- High Voltage : $V_{CBO} = 1700\text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 1.5\text{ V (Max)}$
- High Speed : $t_{f(2)} = 0.1\text{ }\mu\text{s (Typ.)}$

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}	750	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	22	A
	Pulse	I_{CP}	44	
Base Current		I_B	11	A
Collector Power Dissipation		P_C	200	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$

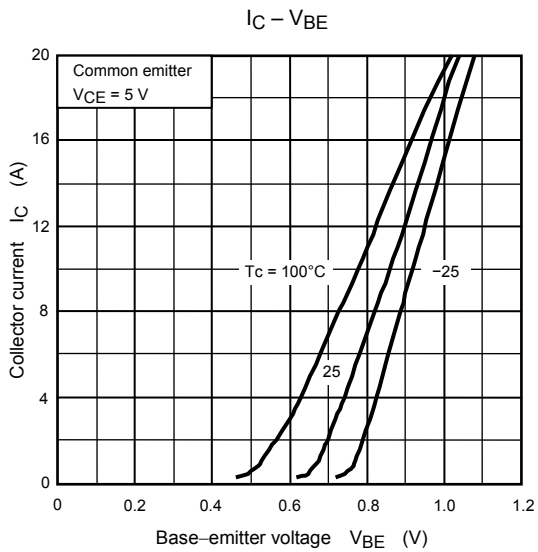
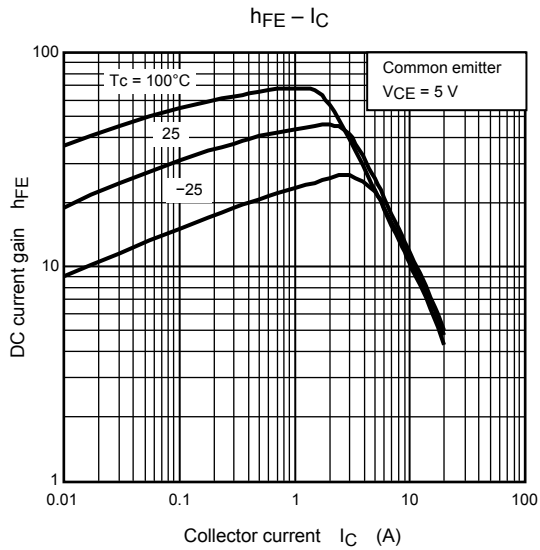
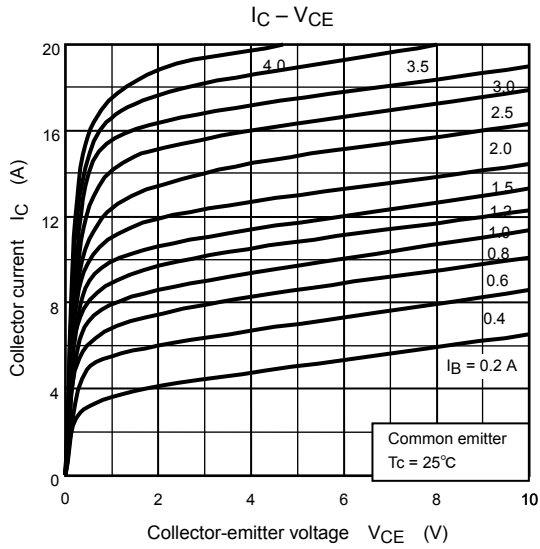


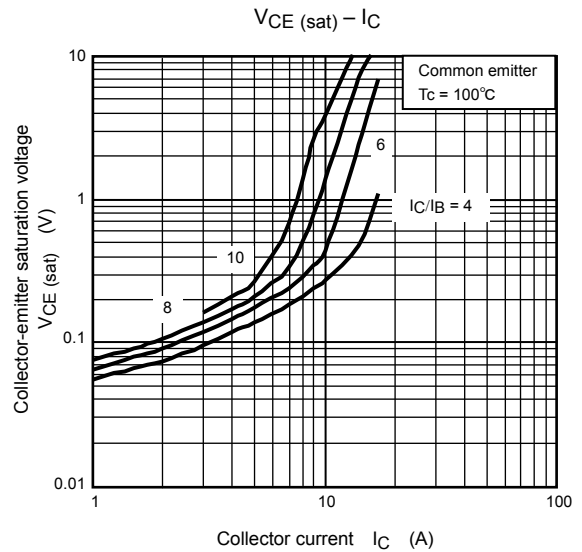
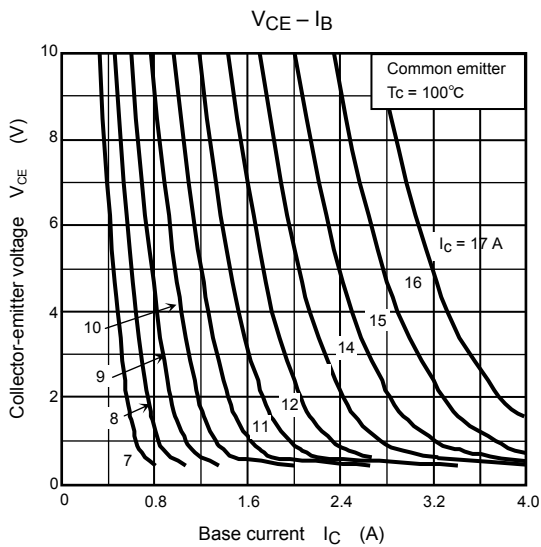
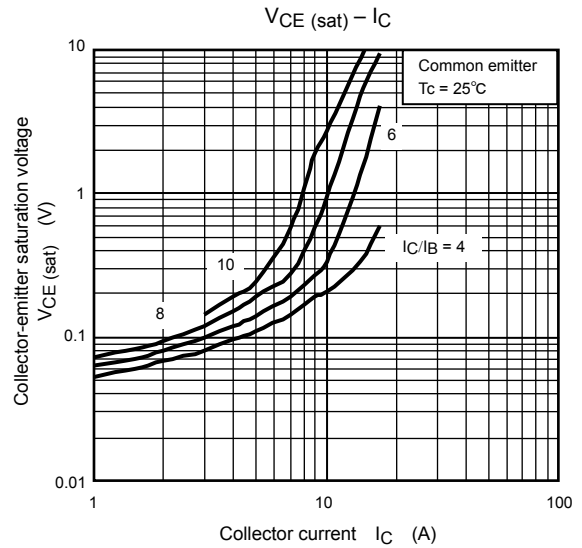
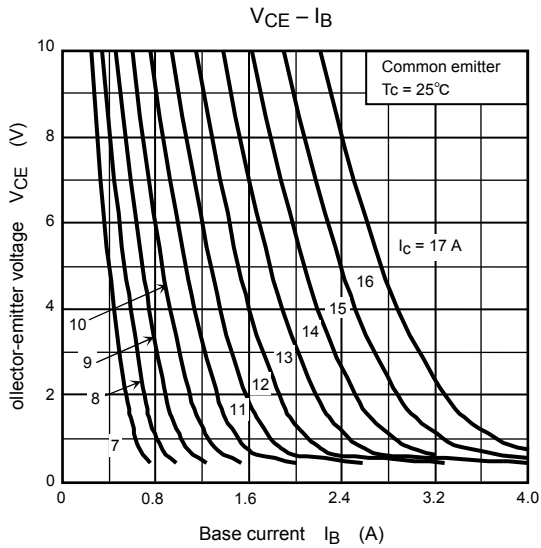
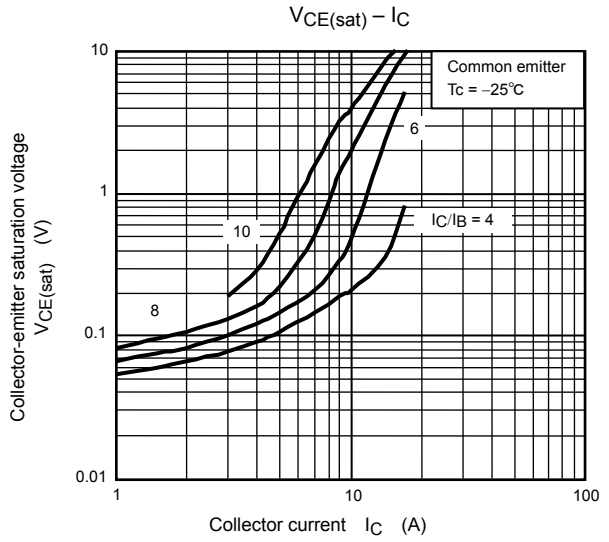
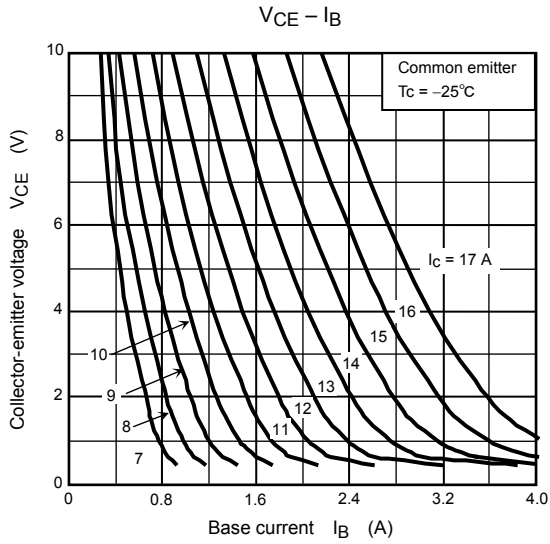
Weight: 9.75 g (typ.)

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).

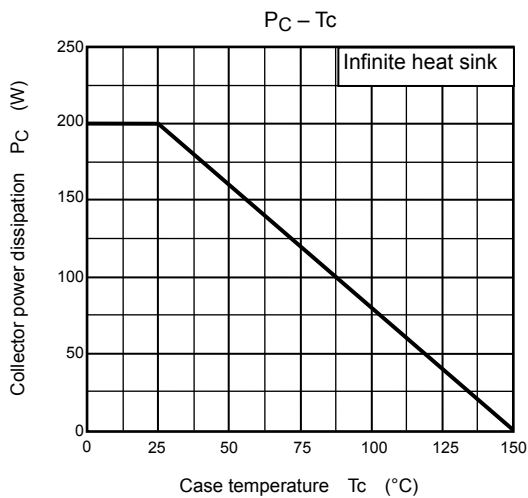
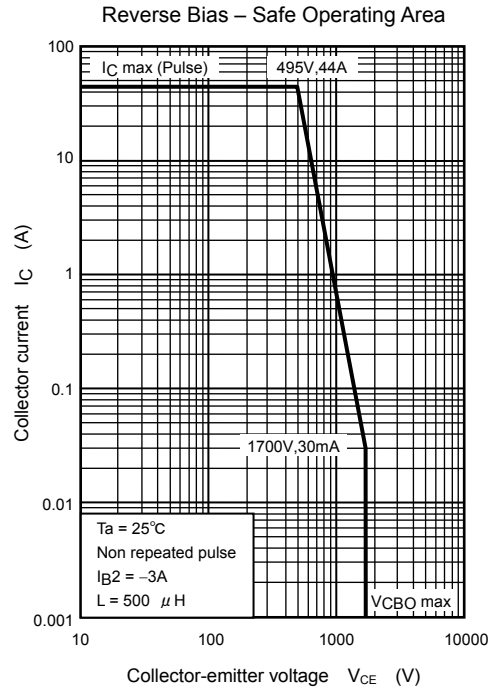
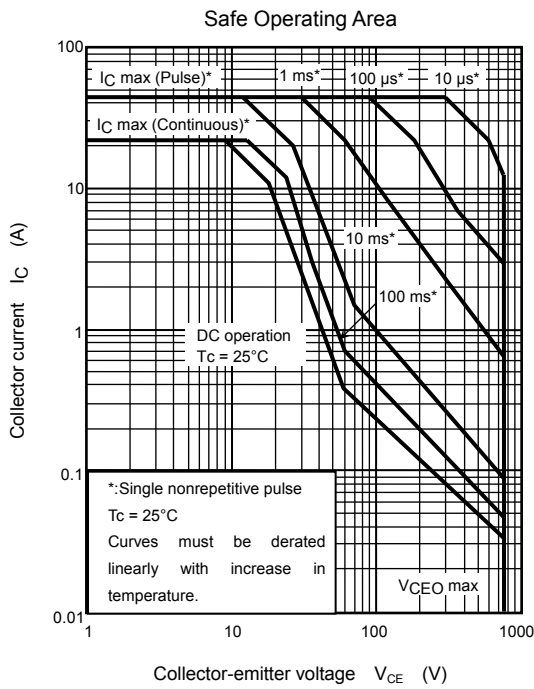
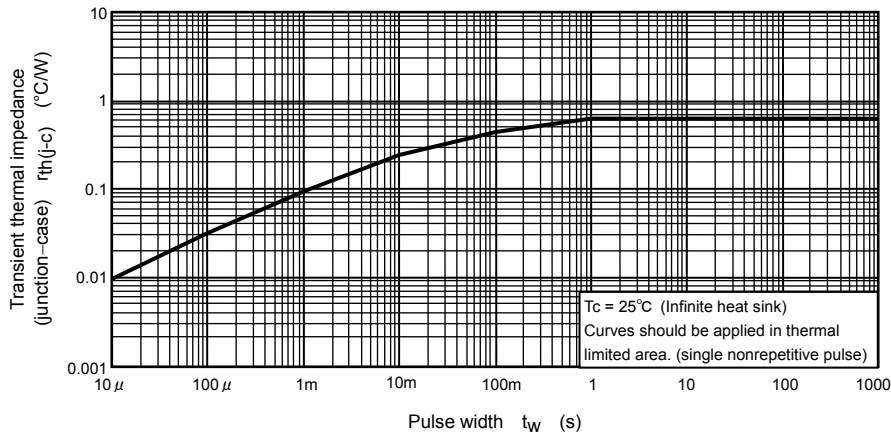
ELECTRICAL CHARACTERISTICS (T_c = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current		I _{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
Collector – Emitter Breakdown Voltage		V _{(BR) CEO}	I _C = 10 mA, I _B = 0	750	—	—	V
DC Current Gain		h _{FE} (1)	V _{CE} = 5 V, I _C = 2 A	30	—	60	—
		h _{FE} (2)	V _{CE} = 5 V, I _C = 8 A	11	—	19	
		h _{FE} (3)	V _{CE} = 5 V, I _C = 17 A	5	—	7.5	
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 17 A, I _B = 4.25 A	—	—	1.5	V
Base-Emitter Saturation Voltage		V _{BE (sat)}	I _C = 17 A, I _B = 4.25 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	—	280	—	pF
Switching Time	Storage Time	t _{stg(1)}	I _{CP} = 9 A, I _{B1} (end) = 1.4 A f _H = 32 kHz	—	4.5	—	μs
	Fall Time	t _{f(1)}		—	0.1	—	
	Storage Time	t _{stg(2)}	I _{CP} = 8 A, I _{B1} (end) = 1.2 A f _H = 45 kHz	—	3.5	—	μs
	Fall Time	t _{f(2)}		—	0.1	—	





$$r_{th(j-c)} = t_w$$



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20070701-EN

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