

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5856

HORIZONTAL DEFLECTION OUTPUT FOR SUPER HIGH RESOLUTION

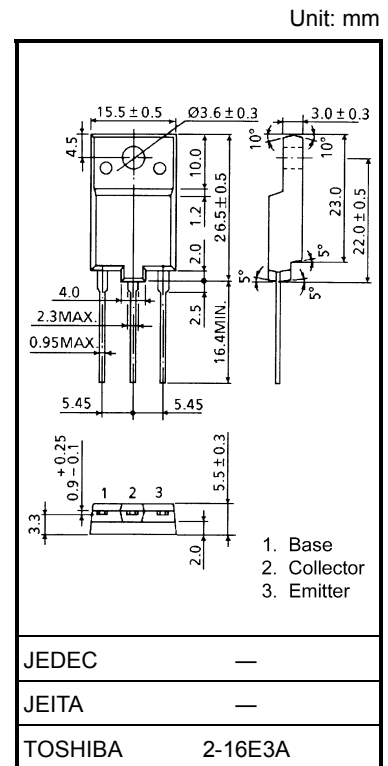
DISPLAY, COLOR TV, DIGITAL TV

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CBO} = 1500 \text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 3 \text{ V (max)}$
- High Speed : $t_f(2) = 0.1 \text{ } \mu\text{s (typ.)}$

MAXIMUM RATINGS (T_c = 25°C)

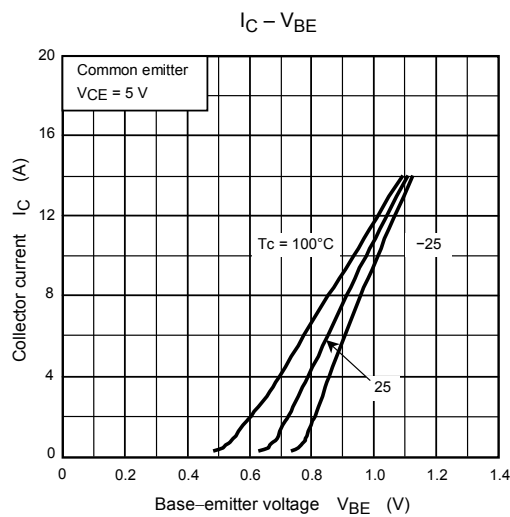
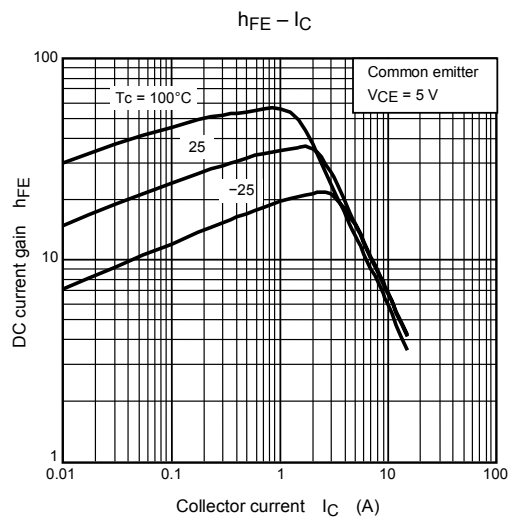
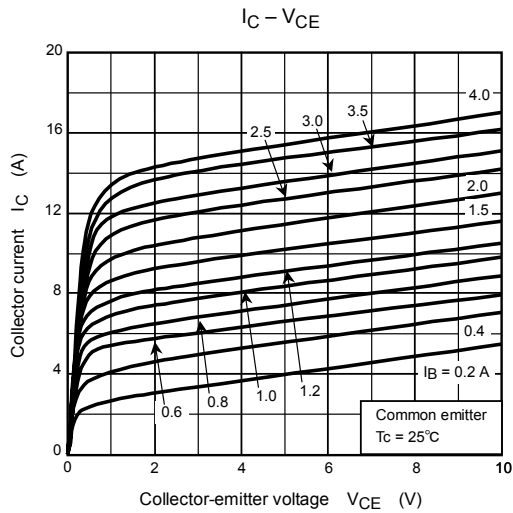
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector–Base Voltage		V_{CBO}	1500	V
Collector–Emitter Voltage		V_{CEO}	700	V
Emitter–Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	14	A
	Pulse	I_{CP}	28	
Base Current		I_B	7	A
Collector Power Dissipation		P_C	55	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	–55~150	°C

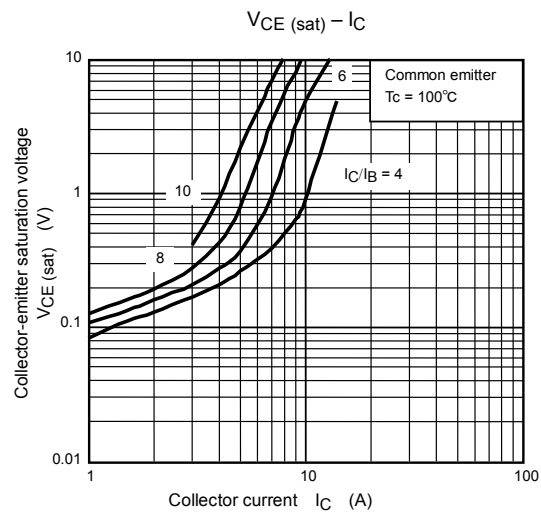
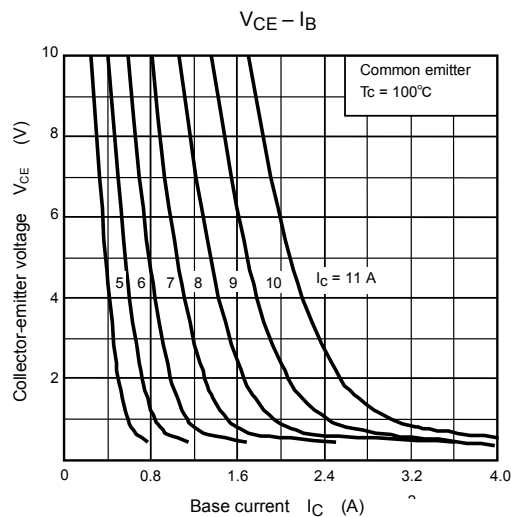
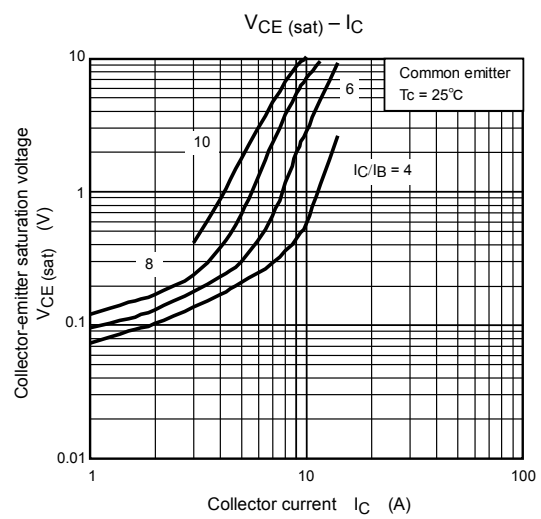
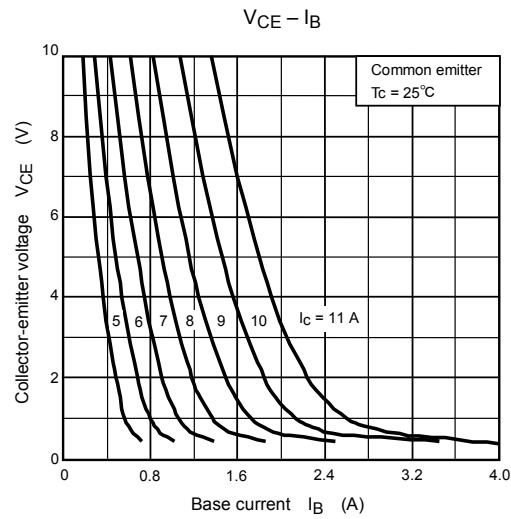
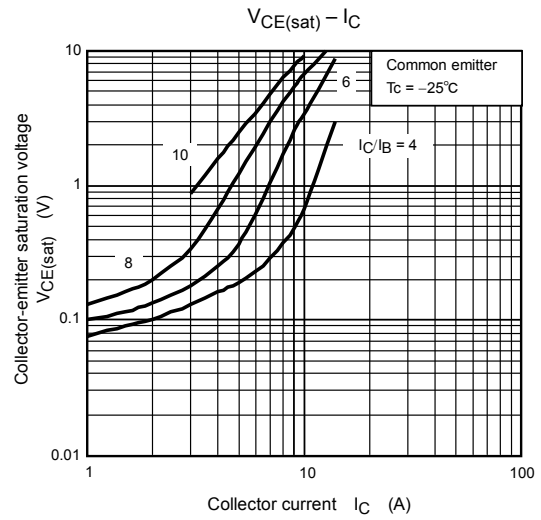
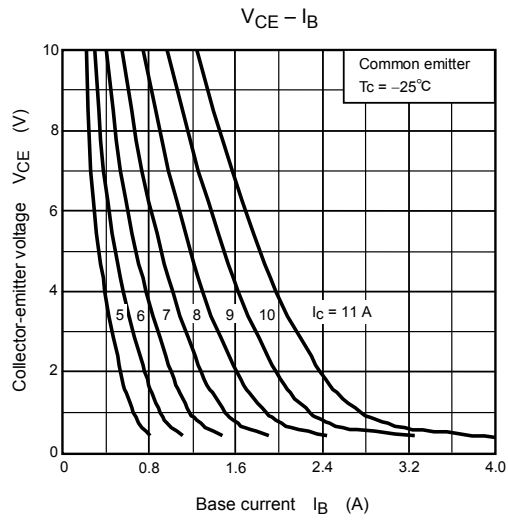


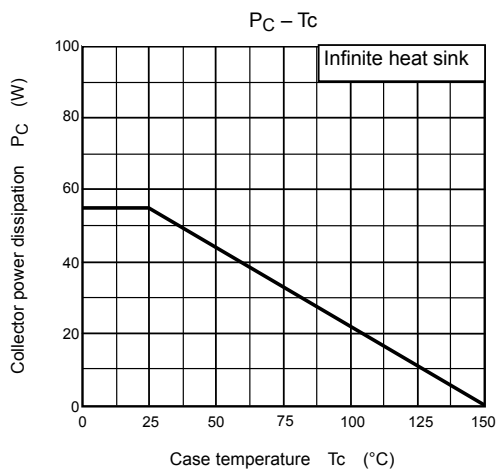
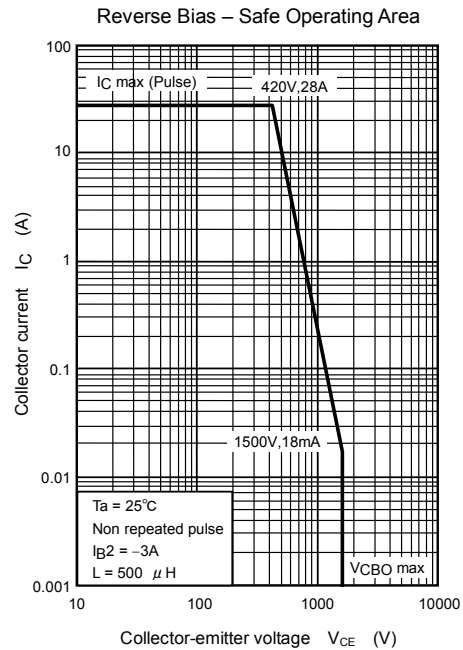
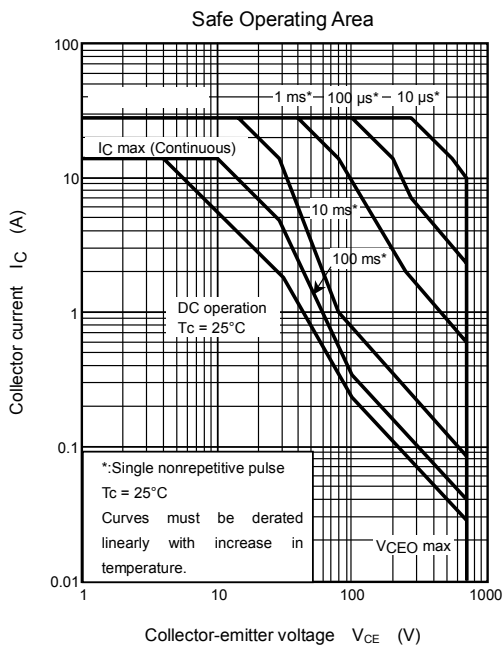
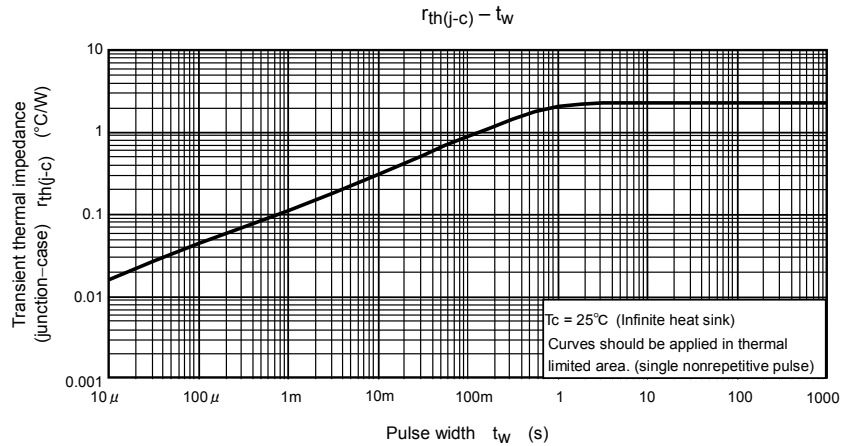
Weight: 5.5 g (typ.)

ELECTRICAL CHARACTERISTICS (T_c = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	Min	Typ.	Max	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 1500 \text{ V}, I_E = 0$	—	—	1	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	100	μA
Collector – Emitter Breakdown Voltage		$V_{(BR) \text{ CEO}}$	$I_C = 10 \text{ mA}, I_B = 0$	700	—	—	V
DC Current Gain		$h_{FE (1)}$	$V_{CE} = 5 \text{ V}, I_C = 2 \text{ A}$	20	—	50	—
		$h_{FE (2)}$	$V_{CE} = 5 \text{ V}, I_C = 7.5 \text{ A}$	6.5	—	12.5	
		$h_{FE (3)}$	$V_{CE} = 5 \text{ V}, I_C = 11 \text{ A}$	4.5	—	7.8	
Collector–Emitter Saturation Voltage		$V_{CE (sat)}$	$I_C = 11 \text{ A}, I_B = 2.75 \text{ A}$	—	—	3	V
Base–Emitter Saturation Voltage		$V_{BE (sat)}$	$I_C = 11 \text{ A}, I_B = 2.75 \text{ A}$	—	1.0	1.4	V
Transition Frequency		f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}$	—	2	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	180	—	pF
Switching Time	Storage Time	$t_{stg(1)}$	$I_{CP} = 7.5 \text{ A}, I_{B1} (\text{end}) = 1.0 \text{ A}$ $f_H = 32 \text{ kHz}$	—	3.5	—	μs
	Fall Time	$t_{f(1)}$		—	0.25	—	
	Storage Time	$t_{stg(2)}$	$I_{CP} = 6.5 \text{ A}, I_{B1} (\text{end}) = 0.9 \text{ A}$ $f_H = 100 \text{ kHz}$	—	1.8	—	μs
	Fall Time	$t_{f(2)}$		—	0.1	—	







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