

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4200

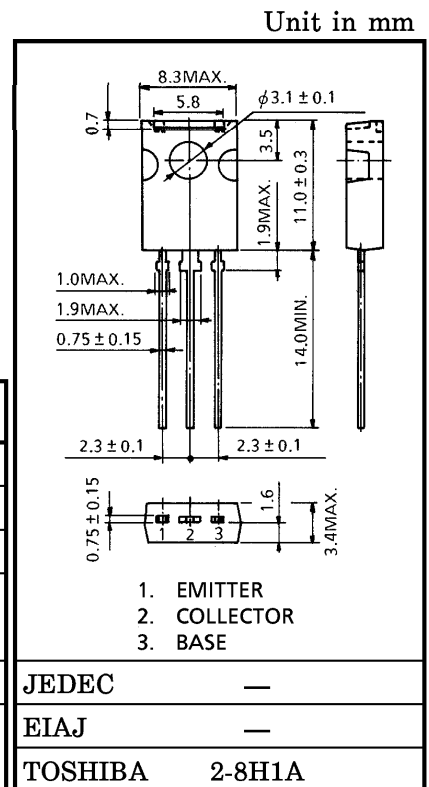
VIDEO DRIVER FOR SUPER HIGH RESOLUTION DISPLAY

HIGH SPEED SWITCHING APPLICATIONS

- High Transition Frequency : $f_T = 2.5\text{GHz}$ (Typ.)
- Low Reverse Transfer Capacitance : $C_{re} = 3.0\text{pF}$ (Typ.)
- High Current Capability.
- Collector Metal is (Fin) is Fully Covered with Mold Resin.

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

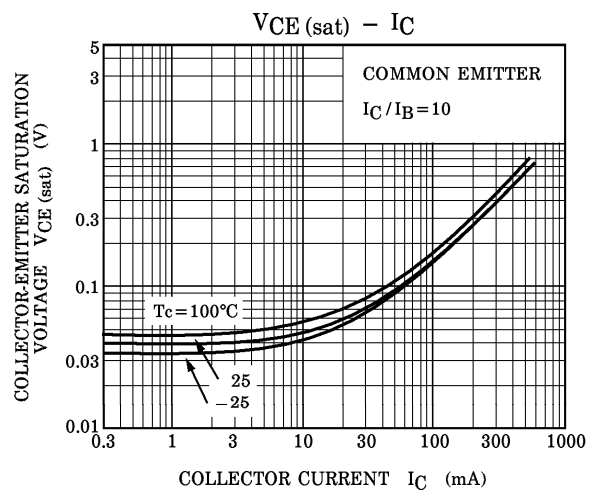
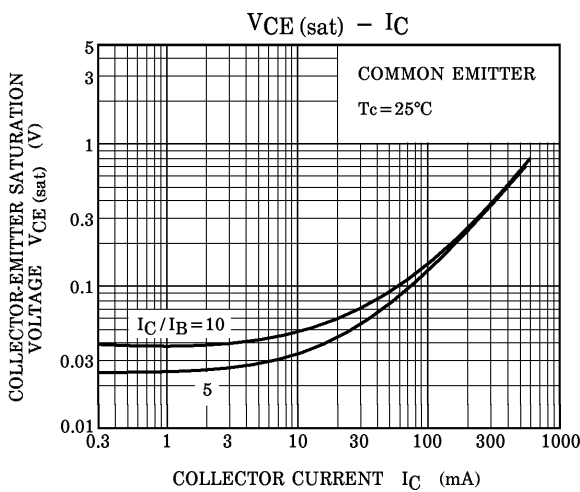
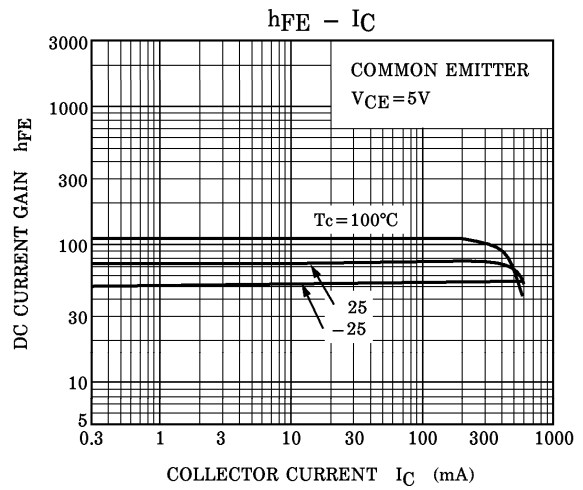
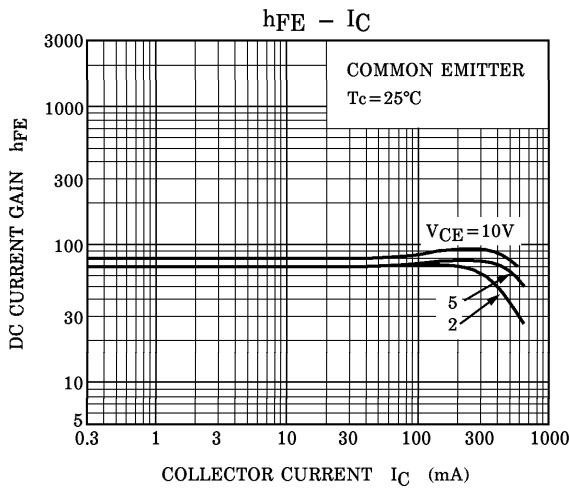
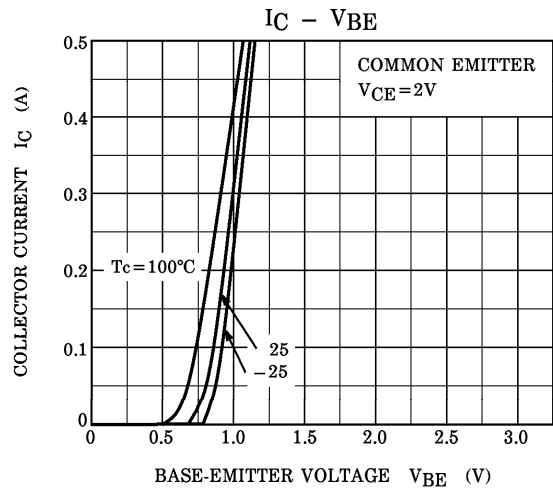
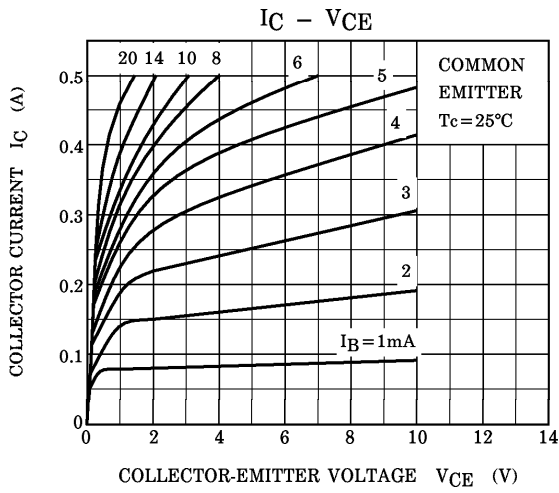
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	20	V
Collector-Emitter Voltage		V_{CEO}	18	V
Emitter-Base Voltage		V_{EBO}	3	V
Collector Current	DC	I_C	0.6	A
	Peak	I_{CP}	1.0	
Base Current		I_B	0.3	A
Collector Power Dissipation	$T_c = 25^\circ\text{C}$	P_C	5	W
	$T_a = 25^\circ\text{C}$		1.5	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature		T_{stg}	-55~150	$^\circ\text{C}$

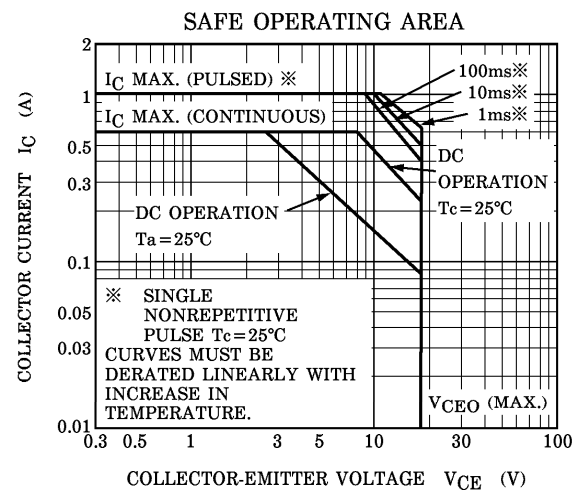
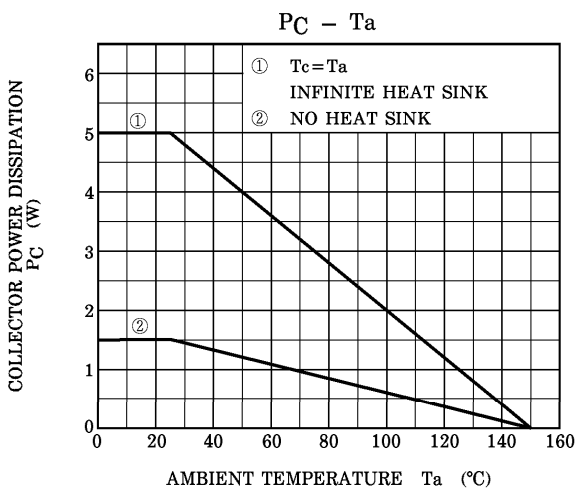
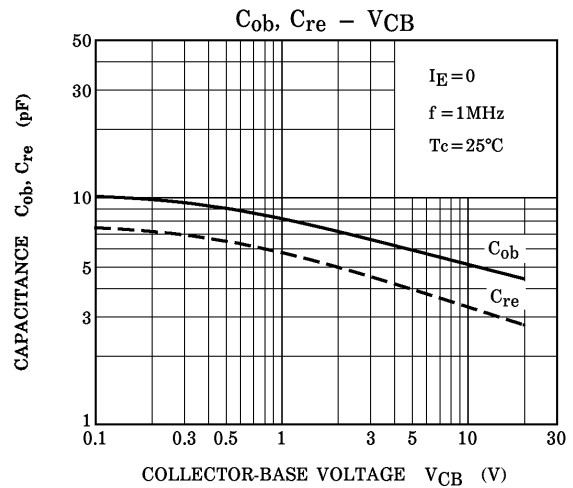
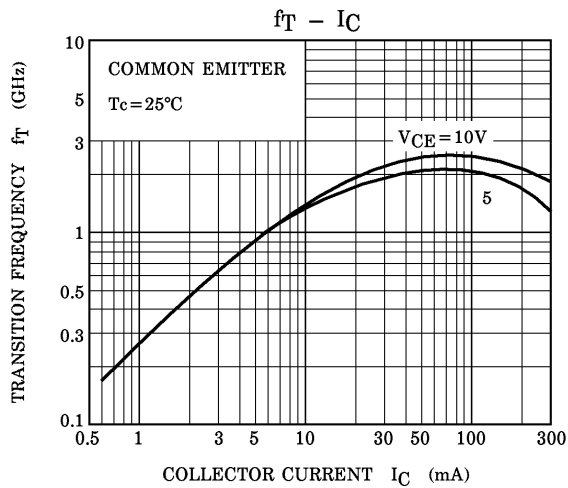
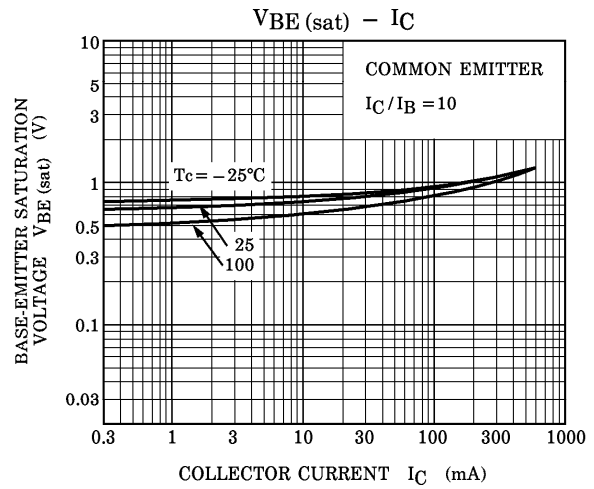
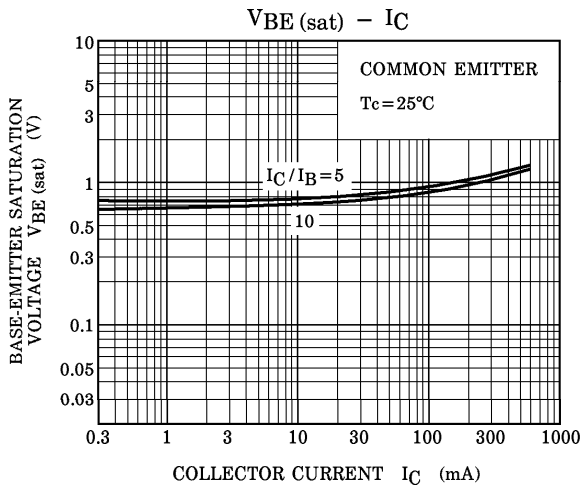


Weight : 0.82g (Typ.)

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0$	—	—	1.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 2\text{V}, I_C = 0$	—	—	100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	18	—	—	V
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$	40	—	200	
	$h_{FE}(2)$	$V_{CE} = 10\text{V}, I_C = 200\text{mA}$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	—	—	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	—	—	1.5	V
Transition Frequency	f_T	$V_{CE} = 10\text{V}, I_C = 200\text{mA}$	—	2.5	—	GHz
Reverse Transfer Capacitance	C_{re}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	—	3.0	5.0	pF





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