查询2SC4200供应商 捷多邦，专业PCB打样工厂，24小时加急出货

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

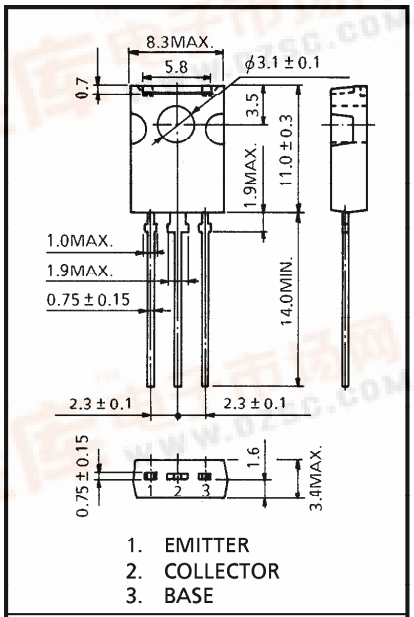
2SC4200

VIDEO DRIVER FOR SUPER HIGH RESOLUTION DISPLAY

HIGH SPEED SWITCHING APPLICATIONS

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

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-8H1A

Weight : 0.82g (Typ.)

MAXIMUM RATINGS (Ta = 25°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	Tc = 25°C	P_C	5	W
	Ta = 25°C		1.5	
Junction Temperature		T_j	150	°C
Storage Temperature		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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

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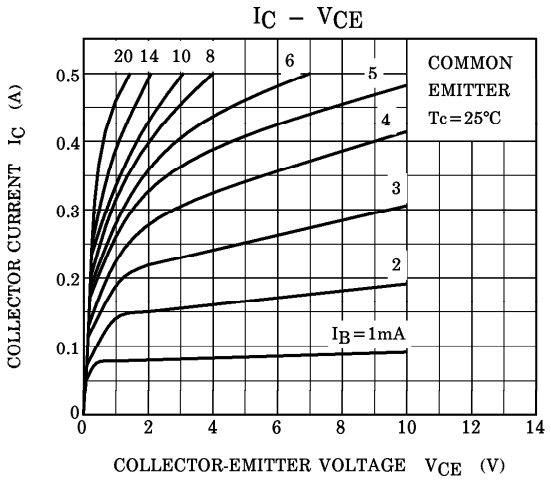
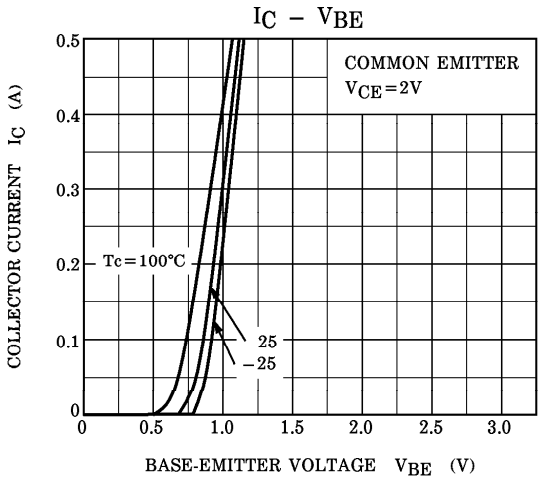
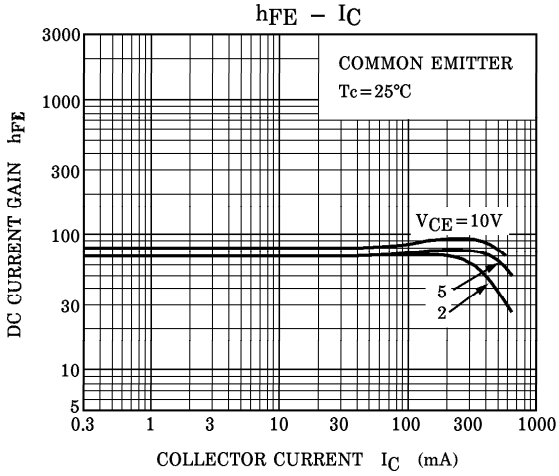
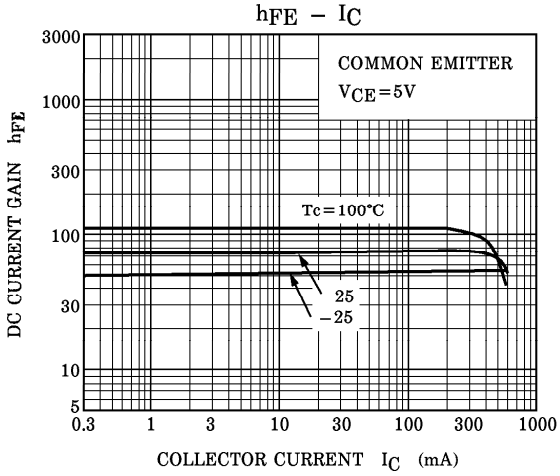
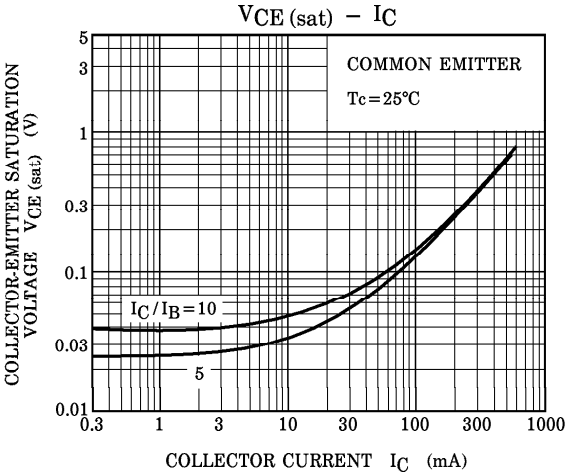
● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

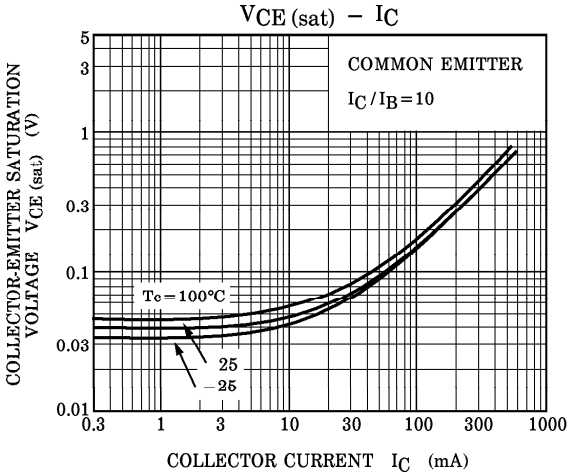












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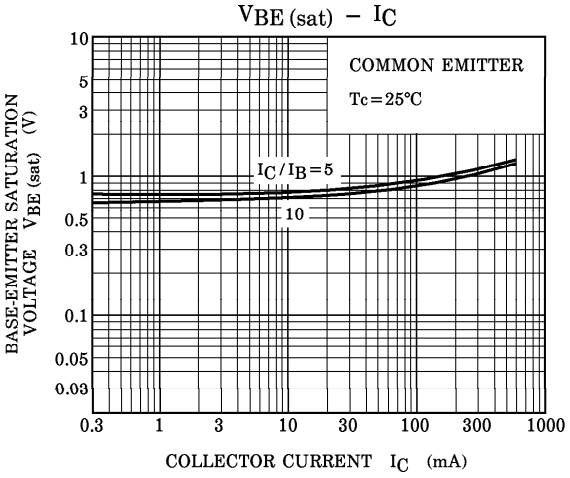
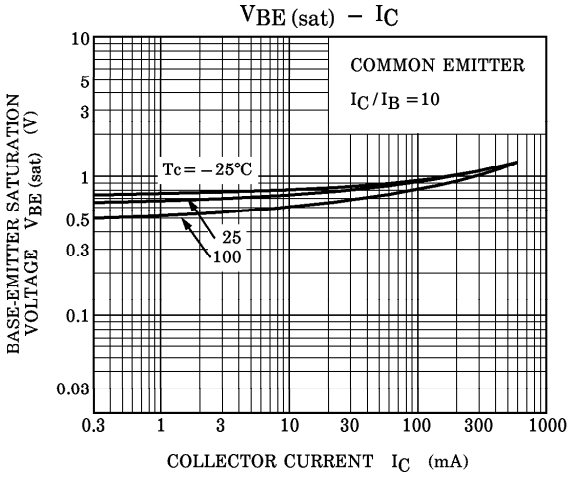
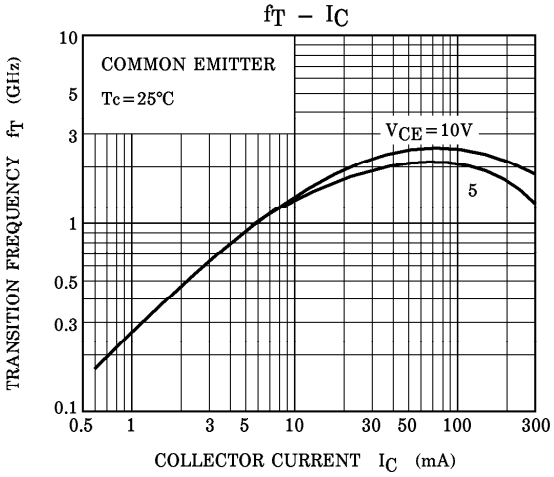
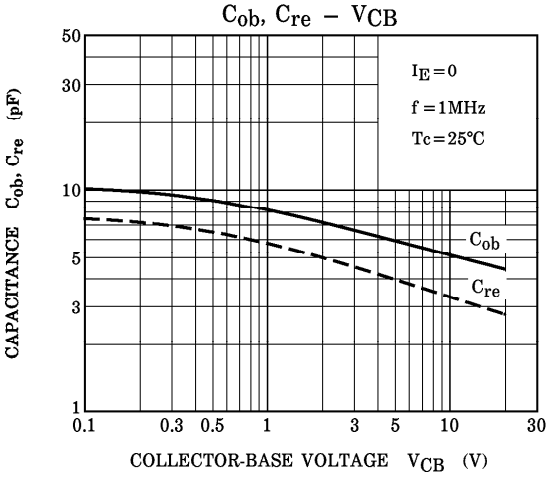
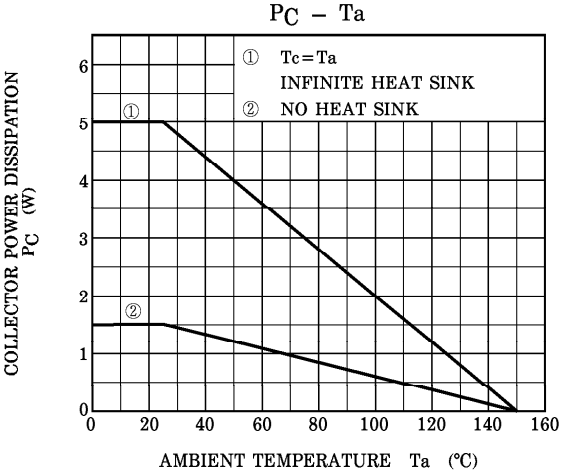
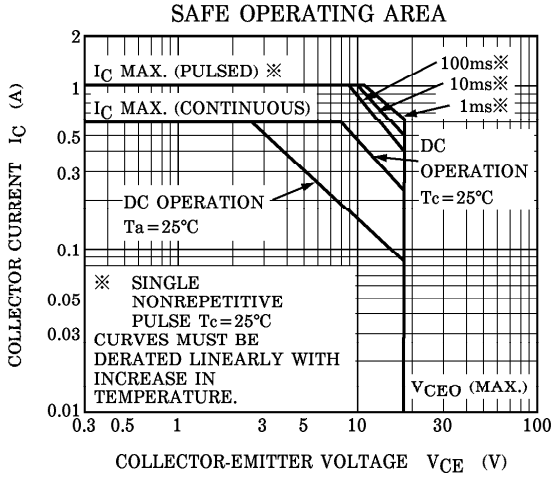

VBE (sat) – IC
COMMON EMITTER
Tc=25°C
IC/IB=5
10
BASE-EMITTER SATURATION VOLTAGE VBE (sat) (V)
COLLECTOR CURRENT IC (mA)


VBE (sat) – IC
COMMON EMITTER
IC/IB=10
Tc=–25°C
25
100
BASE-EMITTER SATURATION VOLTAGE VBE (sat) (V)
COLLECTOR CURRENT IC (mA)


fT – IC
COMMON EMITTER
Tc=25°C
VCE=10V
5
TRANSITION FREQUENCY fT (GHz)
COLLECTOR CURRENT IC (mA)


Cob, Cre – VCB
IE=0
f=1MHz
Tc=25°C
Cob
Cre
CAPACITANCE Cob, Cre (pF)
COLLECTOR-BASE VOLTAGE VCB (V)


PC – Ta
① Tc=Ta
INFINITE HEAT SINK
② NO HEAT SINK
COLLECTOR POWER DISSIPATION PC (W)
AMBIENT TEMPERATURE Ta (°C)


SAFE OPERATING AREA
IC MAX. (PULSED) ※
IC MAX. (CONTINUOUS)
100ms※
10ms※
1ms※
DC OPERATION Tc=25°C
DC OPERATION Ta=25°C
※ SINGLE NONREPETITIVE PULSE Tc=25°C
CURVES MUST BE DERATED LINEARLY WITH INCREASE IN TEMPERATURE.
VCEO (MAX.)
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)