TOSHIBA TRANSISTOR SILICON EPITAXIAL PLANAR TYPE

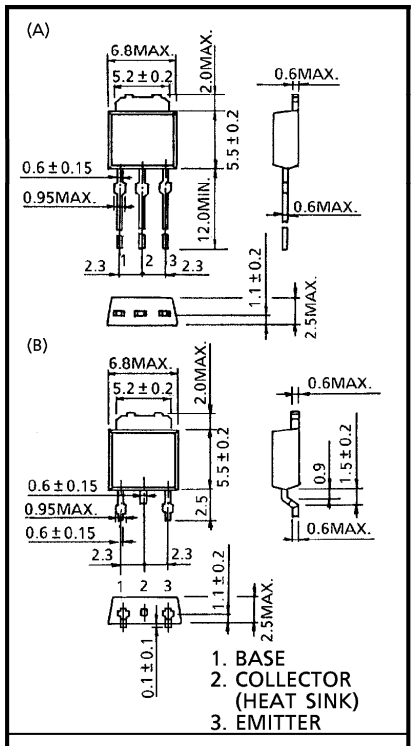
2SC4203

VIDEO OUTPUT FOR HIGH DEFINITION VDT

HIGH SPEED SWITCHING APPLICATIONS

Unit in mm

- High Transition Frequency : f_T = 400 MHz (Typ.) (V_{CE} = 10 V, I_C = 70 mA)
- Low Output Capacitance : C_{ob} = 5 pF (Max.) (V_{CB} = 30 V)
- High Voltage : V_{CEO} = 150 V
- High Power Dissipation : P_C = 10 W



JEDEC	—
EIAJ	—
TOSHIBA	(A)2-7B1A (B)2-7B2A

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	180	V
Collector-Emitter Voltage		V_{CEO}	150	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	0.3	A
	Pulse	I_{CP}	0.5	
Base Current (DC)		I_B	0.2	A
Power Dissipation	Tc = 25°C	P_C	10	W
	Ta = 25°C		1.0	
Junction Temperature		T_j	150	°C
Storage Temperature Range		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} = 150 V, I_E = 0	—	—	10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5 V, I_C = 0	—	—	10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1 mA, I_B = 0	150	—	—	V
DC Current Gain	$h_{FE(1)}$	V_{CE} = 10 V, I_C = 50 mA	40	—	240	
	$h_{FE(2)}$	V_{CE} = 10 V, I_C = 200 mA	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 200 mA, I_B = 20 mA	—	—	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 200 mA, I_B = 20 mA	—	—	1.5	V
Transition Frequency	f_T	V_{CE} = 10 V, I_C = 70 mA	300	400	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 30 V, f = 1 MHz, I_E = 0	—	4.0	5.0	pF

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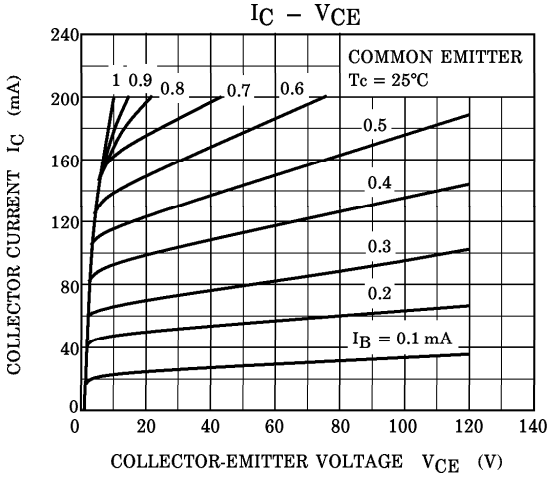
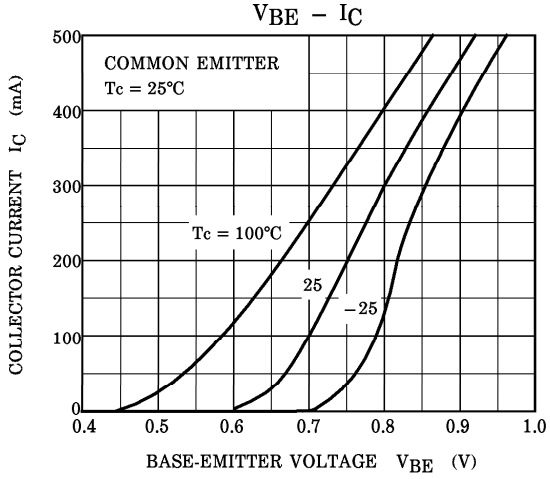
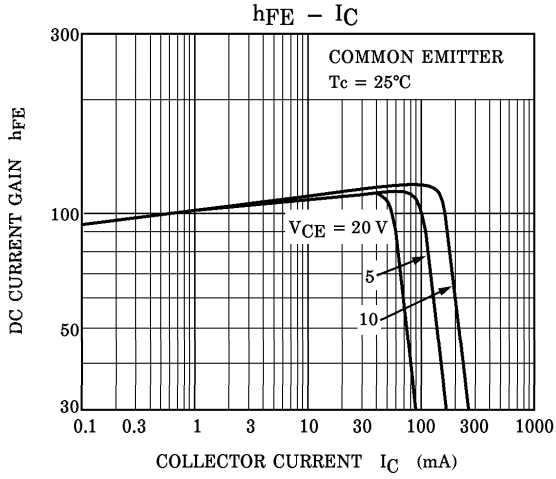
$I_C - V_{CE}$



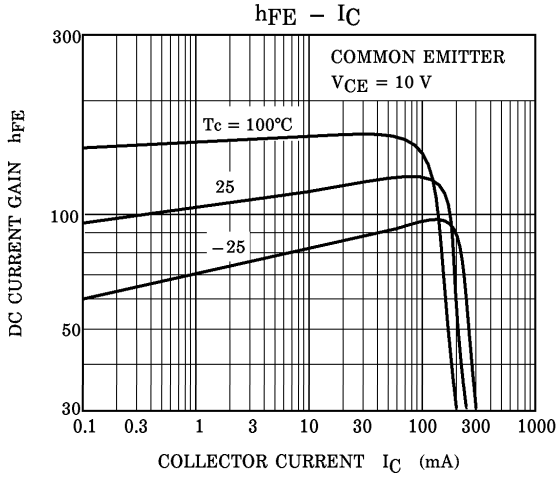
$V_{BE} - I_C$



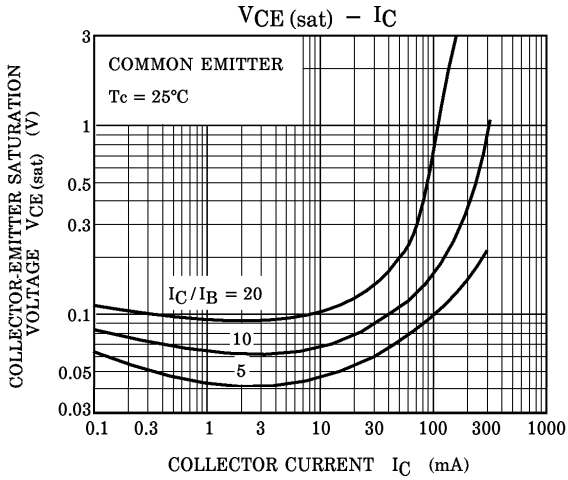
$h_{FE} - I_C$



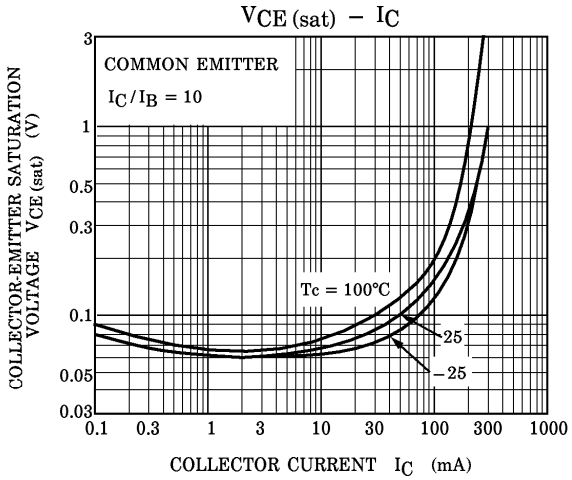
$h_{FE} - I_C$



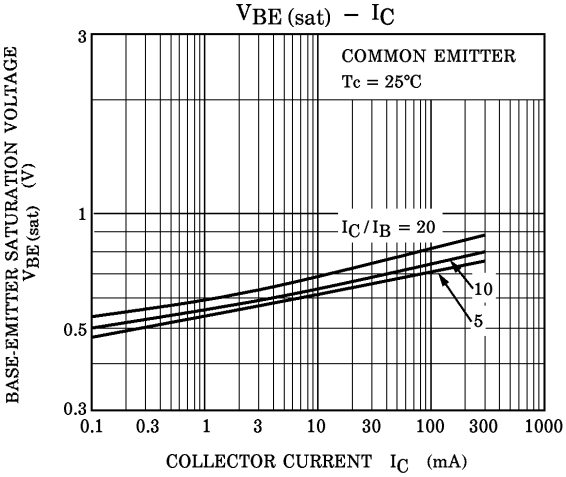
$V_{CE\,(sat)} - I_C$



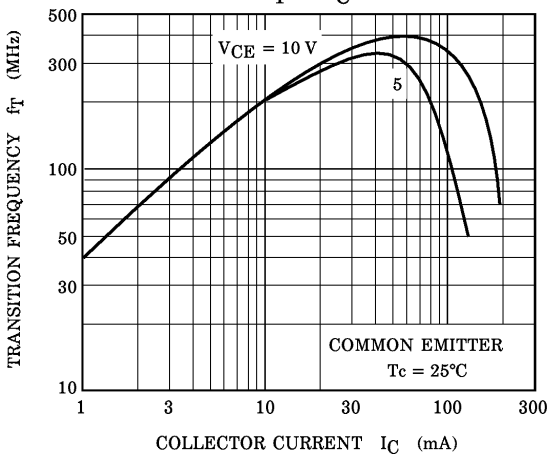
$V_{CE\,(sat)} - I_C$



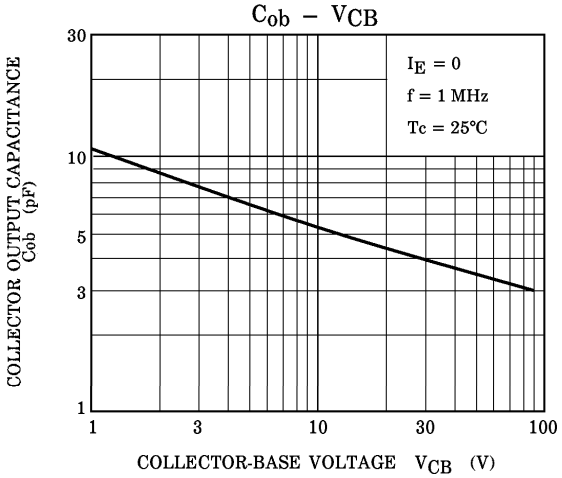
$V_{BE\,(sat)}$ – I_C



f_T – I_C



C_{ob} – V_{CB}



P_C – Ta