TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT)

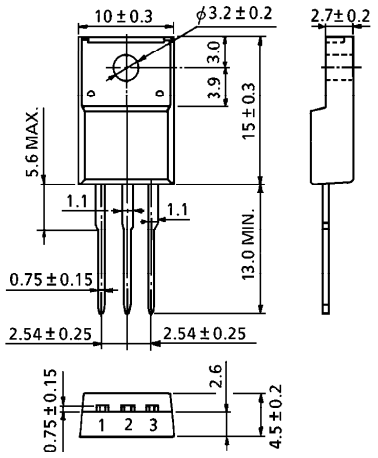
2SC4605

VIDEO OUTPUT FOR SUPER HIGH RESOLUTION DISPLAY

HIGH SPEED SWITCHING APPLICATIONS

- High Transition Frequency : f_T = 1.1GHz (Typ.)
- Low Collector Output Capacitance : C_{ob} = 4.8pF (Typ.)
- High Voltage : V_{CEO} = 100V
- High Collector Power Dissipation Capability : P_C = 10W

Unit in mm



1. BASE
2. COLLECTOR
3. EMITTER

JEDEC	—
EIAJ	SC-67
TOSHIBA	2-10R1A

Weight : 1.7g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	100	V
Collector-Emitter Voltage		V_{CEO}	100	V
Emitter-Base Voltage		V_{EBO}	3	V
Collector Current	DC	I_C	0.5	A
	Peak	I_{CP}	1.0	
Base Current		I_B	0.2	A
Collector Power Dissipation	Ta = 25°C	P_C	2	W
	Tc = 25°C		10	
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} = 100V, I_E = 0	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 3V, I_C = 0	—	—	100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	100	—	—	V
DC Current Gain	$h_{FE(1)}$	V_{CE} = 10V, I_C = 100mA	30	70	150	
	$h_{FE(2)}$	V_{CE} = 10V, I_C = 300mA	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 300mA, I_B = 30mA	—	0.8	3.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 300mA, I_B = 30mA	—	1.3	2.5	V
Transition Frequency	f_T	V_{CE} = 10V, I_C = 100mA	—	1100	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 30V, I_E = 0, f = 1MHz	—	4.8	5.2	pF

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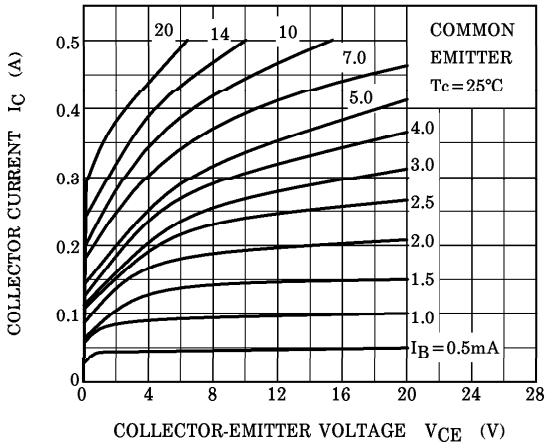
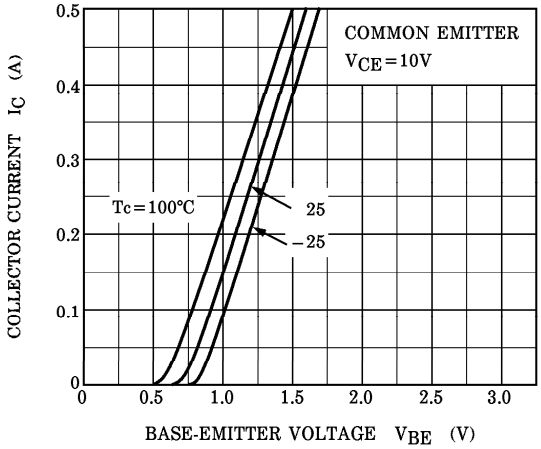
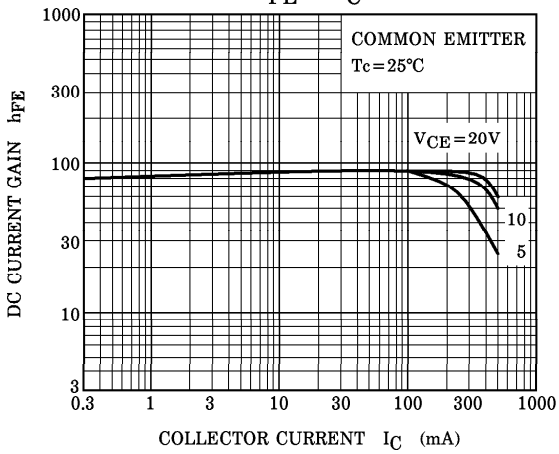
I_C – V_{CE}



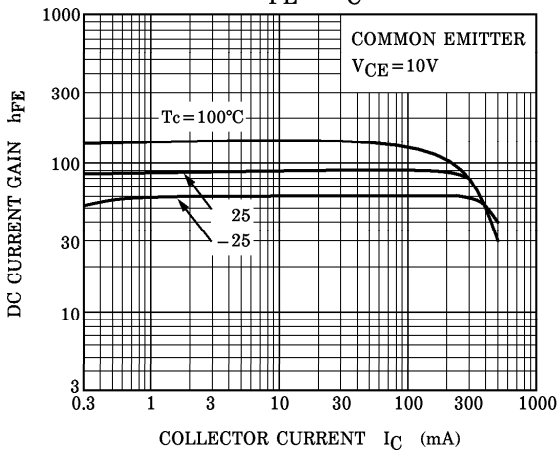
I_C – V_{BE}



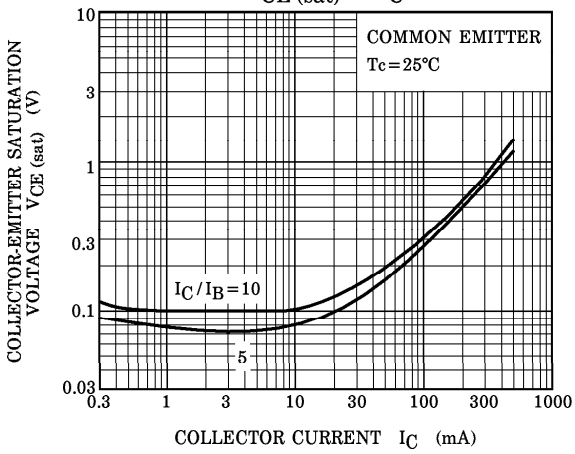
h_{FE} – I_C



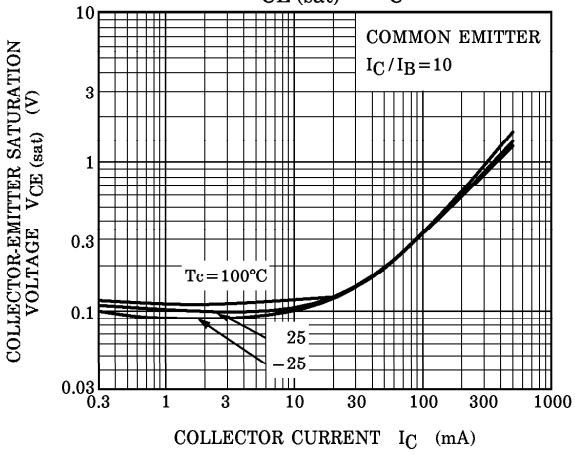
h_{FE} – I_C



$V_{CE\,(sat)}$ – I_C



$V_{CE\,(sat)}$ – I_C



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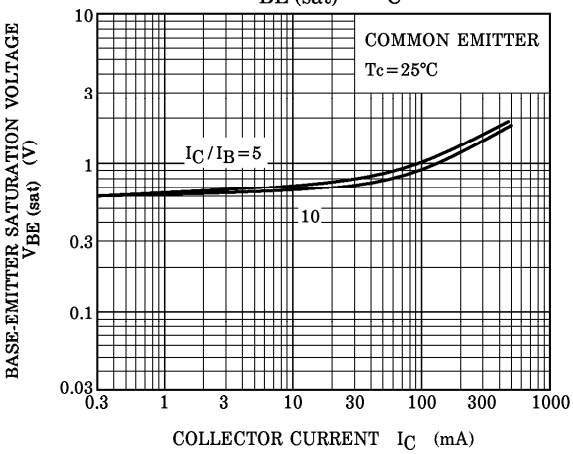
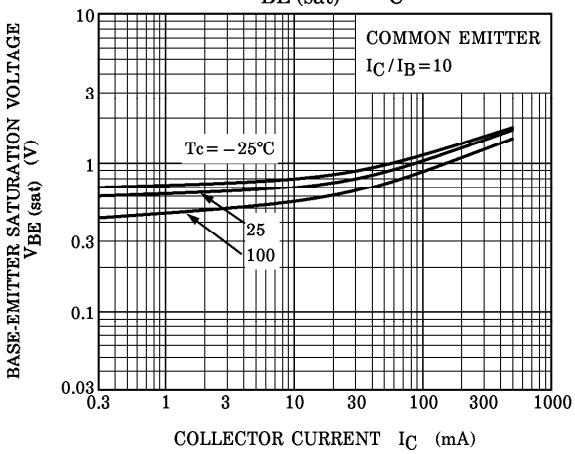
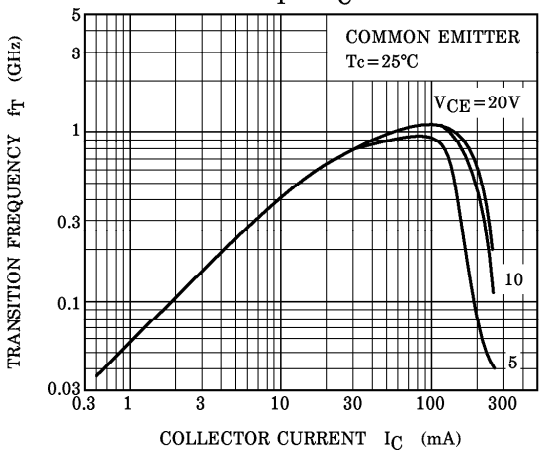
$V_{BE\,(sat)}$ – I_C



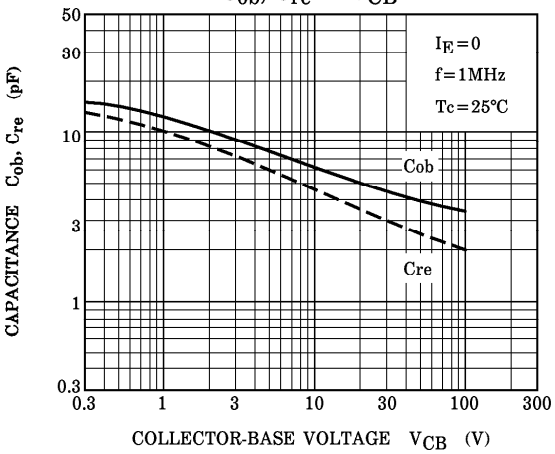
$V_{BE\,(sat)}$ – I_C



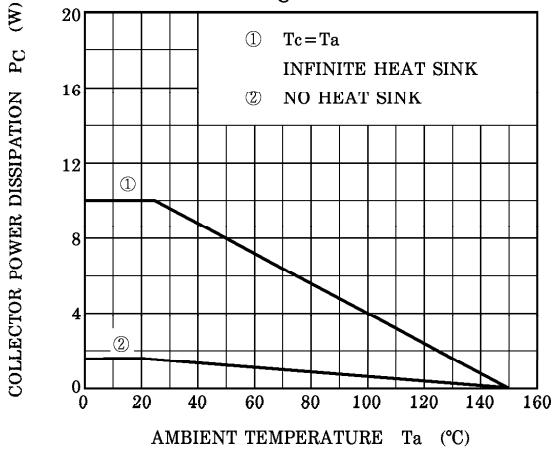
f_T – I_C



C_{ob}, C_{re} – V_{CB}



P_C – Ta



SAFE OPERATING AREA