

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT)

# 2SC4605

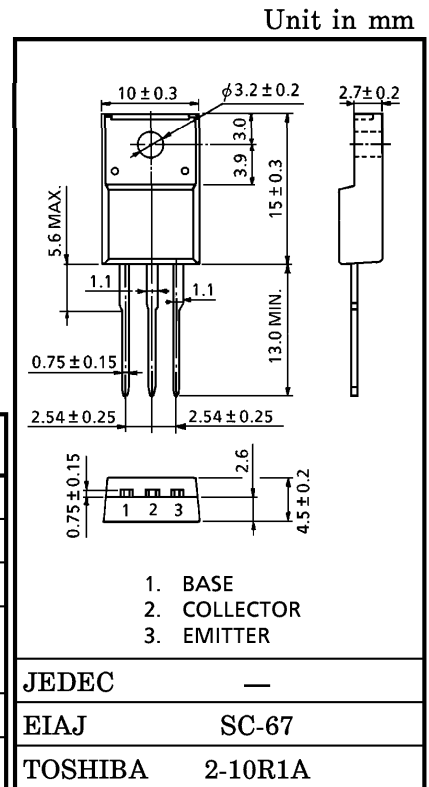
VIDEO OUTPUT FOR SUPER HIGH RESOLUTION DISPLAY

HIGH SPEED SWITCHING APPLICATIONS

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

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

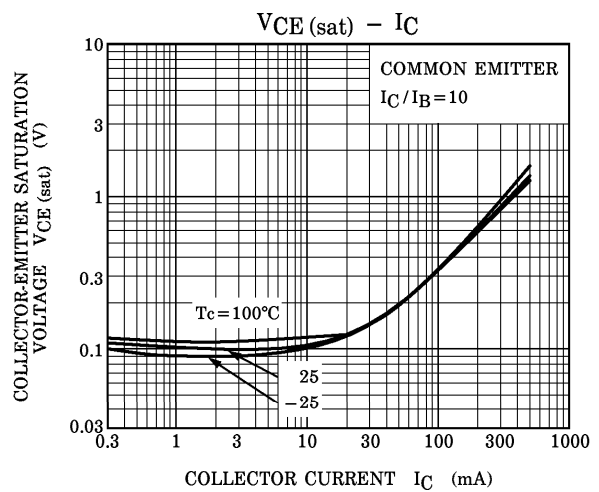
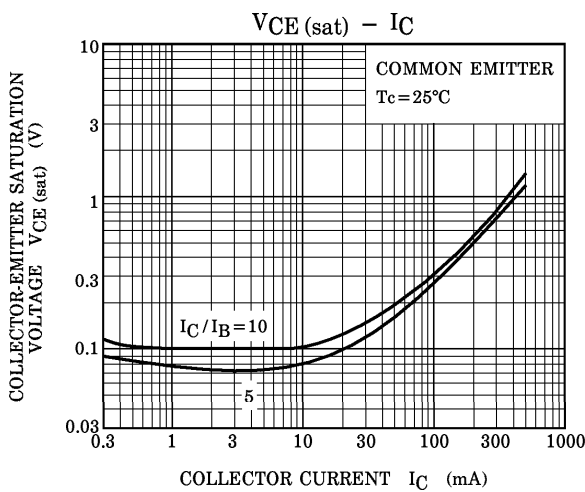
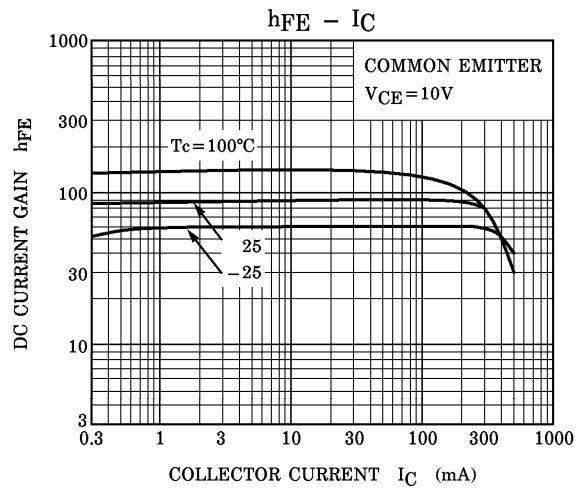
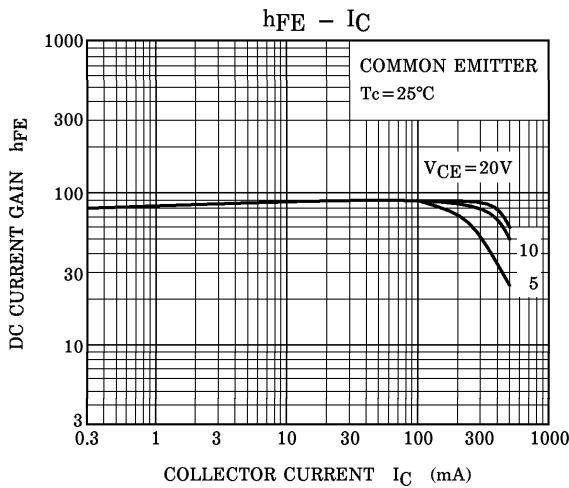
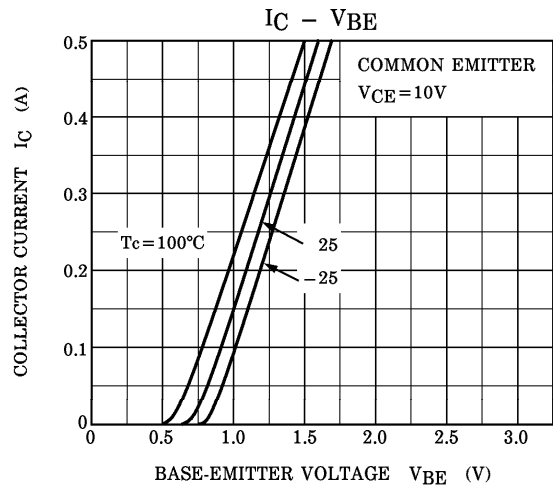
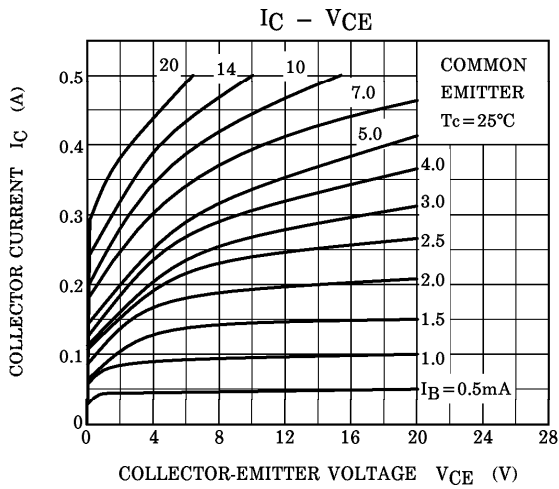
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	100	V
Collector-Emitter Voltage		$V_{CEO}$	100	V
Emitter-Base Voltage		$V_{EBO}$	3	V
Collector Current	DC	$I_C$	0.5	A
	Peak	$I_{CP}$	1.0	
Base Current		$I_B$	0.2	A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	$P_C$	2	W
	$T_c = 25^\circ\text{C}$		10	
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ\text{C}$

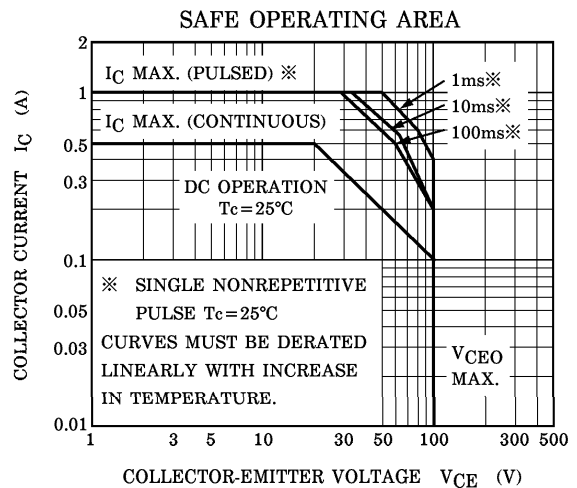
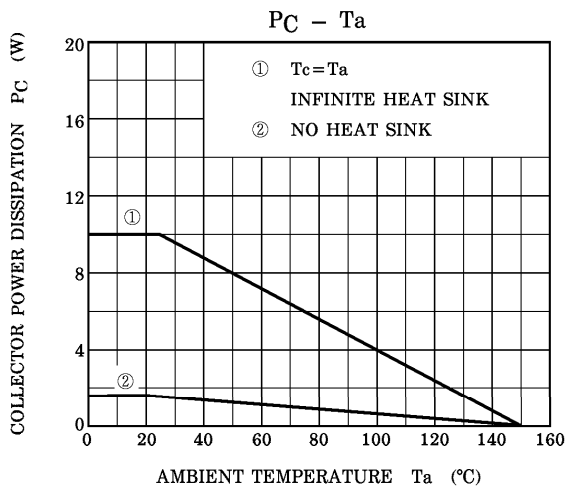
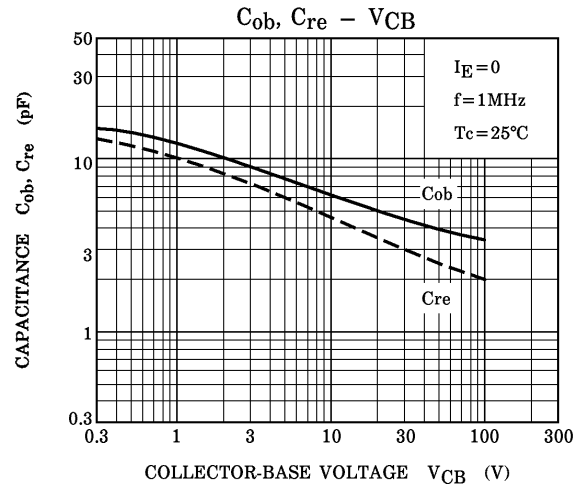
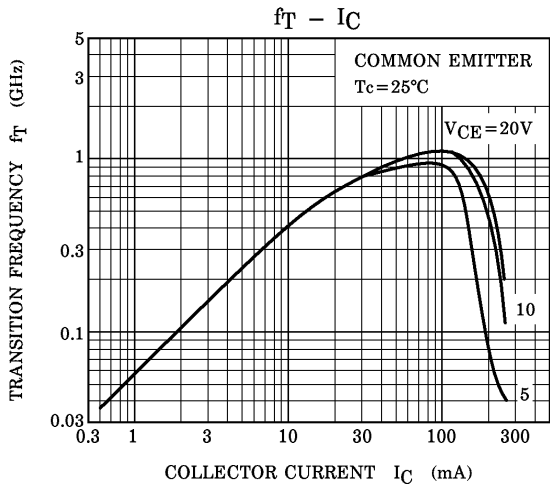
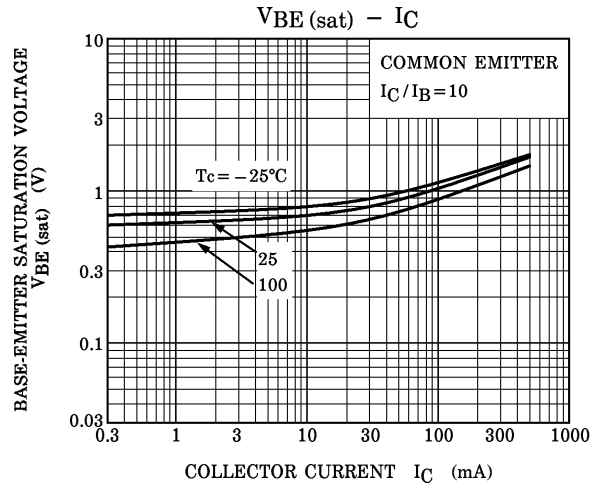
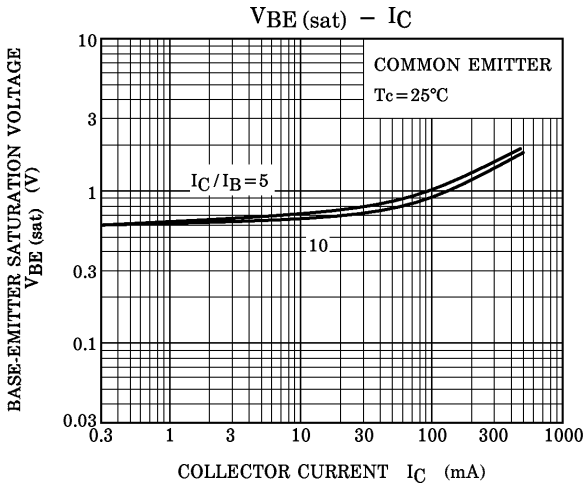


Weight : 1.7g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 100\text{V}, I_E = 0$	—	—	100	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$	—	—	100	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	100	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}, I_C = 100\text{mA}$	30	70	150	
	$h_{FE(2)}$	$V_{CE} = 10\text{V}, I_C = 300\text{mA}$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 300\text{mA}, I_B = 30\text{mA}$	—	0.8	3.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 300\text{mA}, I_B = 30\text{mA}$	—	1.3	2.5	V
Transition Frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 100\text{mA}$	—	1100	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 30\text{V}, I_E = 0, f = 1\text{MHz}$	—	4.8	5.2	pF





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