TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

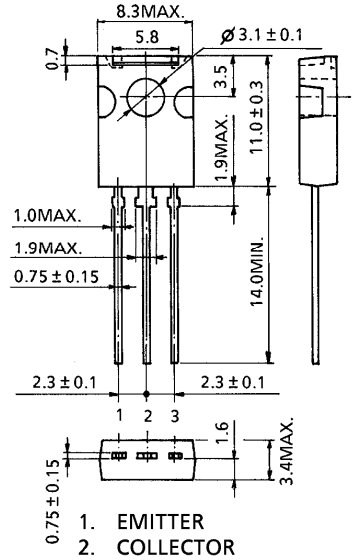
2SC4679

HDTV CHROMA OUTPUT APPLICATIONS

VIDEO OUTPUT STAGE IN HIGH RESOLUTION DISPLAY

- High Transition Frequency : f_T = 240MHz
- Small Collector Output Capacitance : C_{ob} = 2.4pF (Typ.) (V_{CB} = 30V)
- High Voltage : V_{CEO} = 300V
- Collector Metal (Fin) is Fully Covered with Mold Resin

Unit in mm



JEDEC	—
JEITA	—
TOSHIBA	2-8H1A

Weight : 0.82g (Typ.)

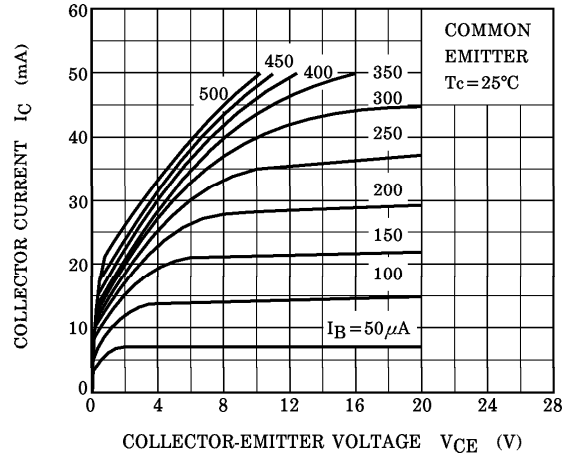
MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	300	V
Collector-Emitter Voltage		V_{CEO}	300	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	50	mA
	Pulse	I_{CP}	100	
Base Current		I_B	5	mA
Collector Power Dissipation	Ta = 25°C	P_C	1.5	W
	Tc = 25°C		8	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

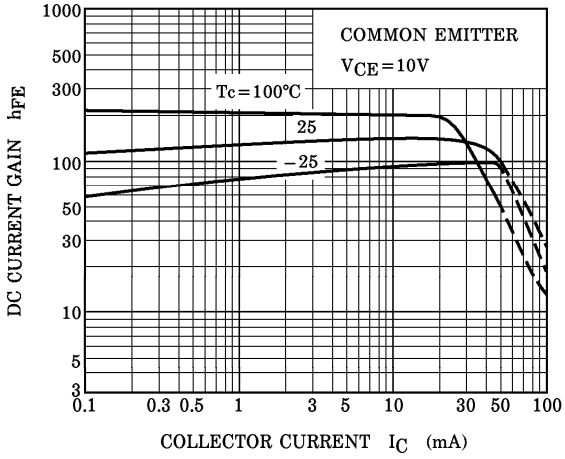
ELECTRICAL CHARACTERISTICS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 300V, I_E = 0	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	10	μA
DC Current Gain	$h_{FE\ (1)}$	V_{CE} = 10V, I_C = 10mA	80	—	200	
	$h_{FE\ (2)}$	V_{CE} = 10V, I_C = 30mA	70	—	—	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C = 20mA, I_B = 2mA	—	—	0.5	V
Base-Emitter Saturation Voltage	$V_{BE\ (sat)}$	I_C = 20mA, I_B = 2mA	—	—	1.0	V
Transition Frequency	f_T	V_{CE} = 10V, I_C = 20mA	—	240	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 30V, f = 1MHz, I_E = 0	—	2.4	3.0	pF

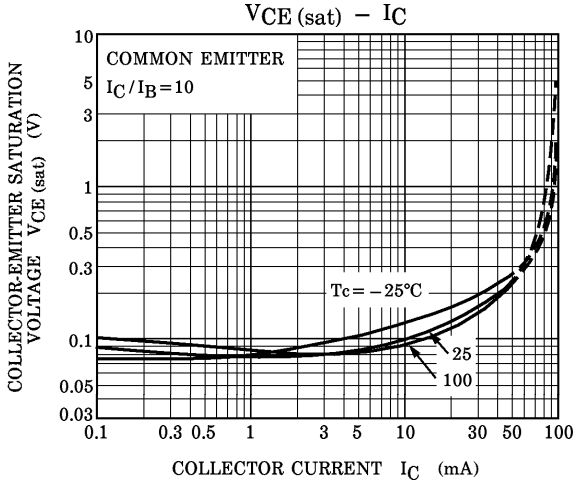
I_C – V_{CE}



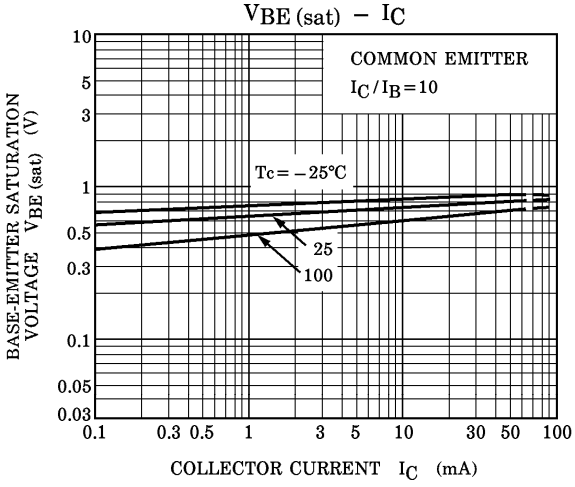
h_{FE} – I_C



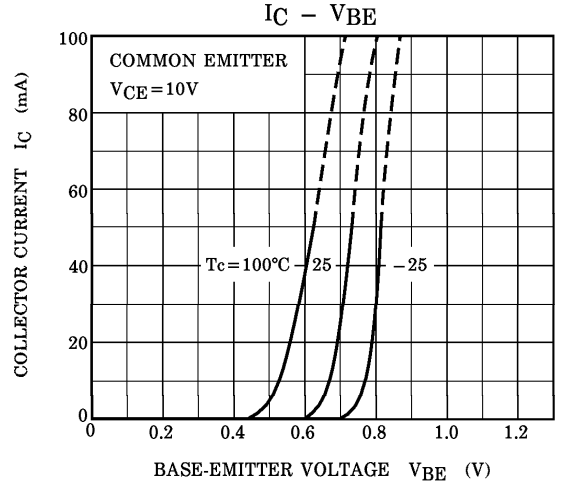
$V_{CE\,(sat)}$ – I_C



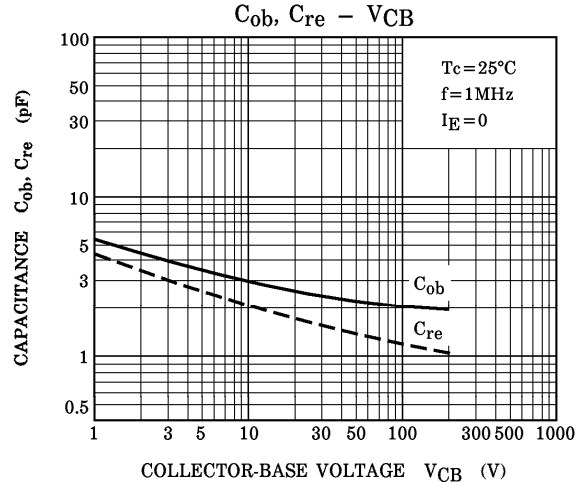
$V_{BE\,(sat)}$ – I_C



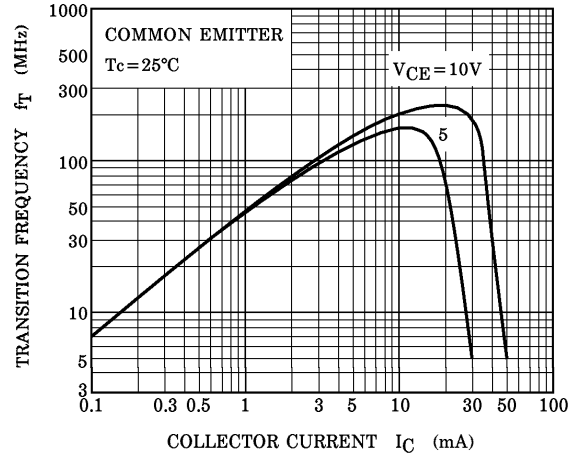
I_C – V_{BE}



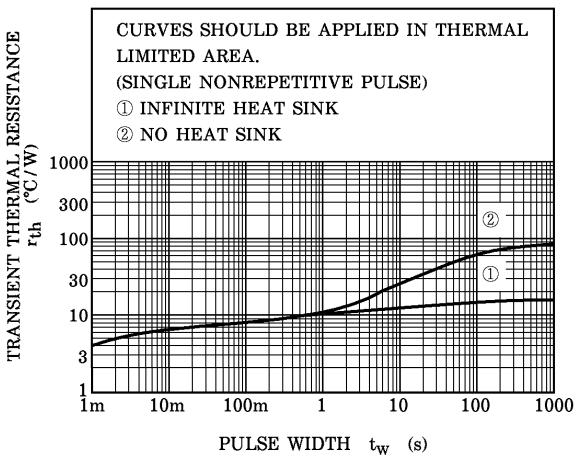
C_{ob}, C_{re} – V_{CB}



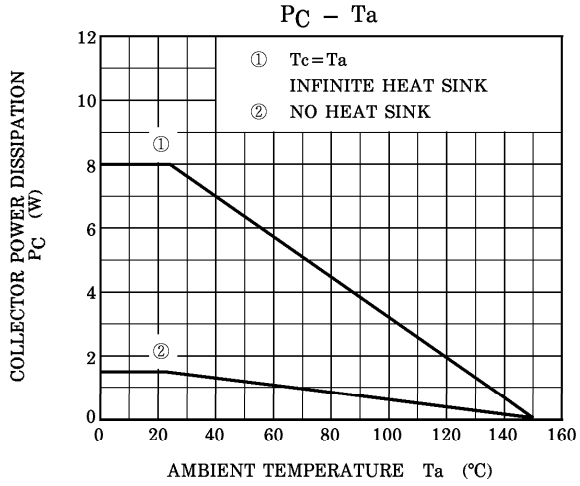
f_T – I_C



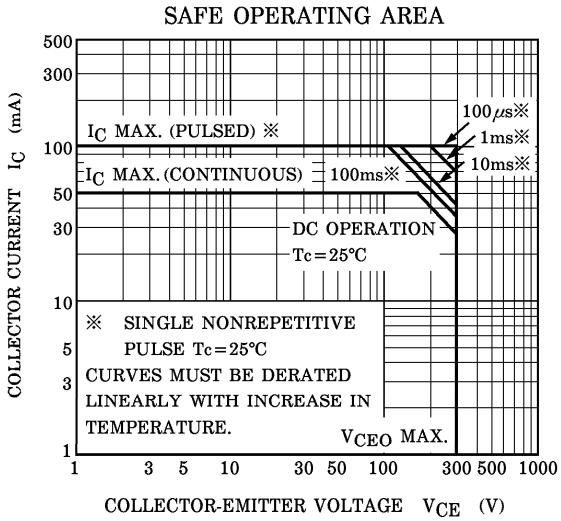
r_{th} – t_w



P_C – Ta



SAFE OPERATING AREA



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