TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED PLANAR TYPE

2SC4686, 2SC4686A

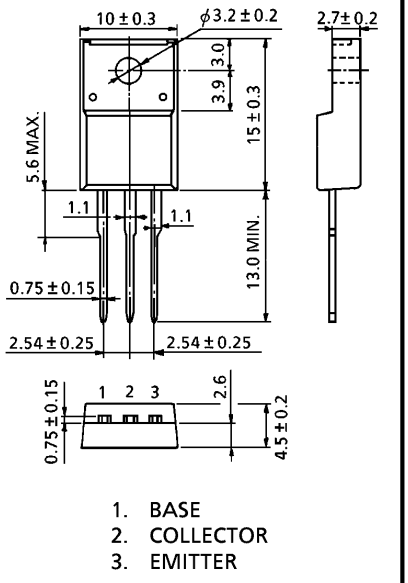
TV DYNAMIC FOCUS APPLICATIONS

HIGH VOLTAGE SWITCHING APPLICATIONS

HIGH VOLTAGE AMPLIFIER APPLICATIONS

- High Voltage : V_{CEO} = 1200V (Max.)
- Small Collector Output Capacitance : C_{ob} = 2.2pF (Typ.) (V_{CB} = 100V)

Unit in mm



JEDEC	—
JEITA	SC-67
TOSHIBA	2-10R1A

Weight : 1.7g (Typ.)

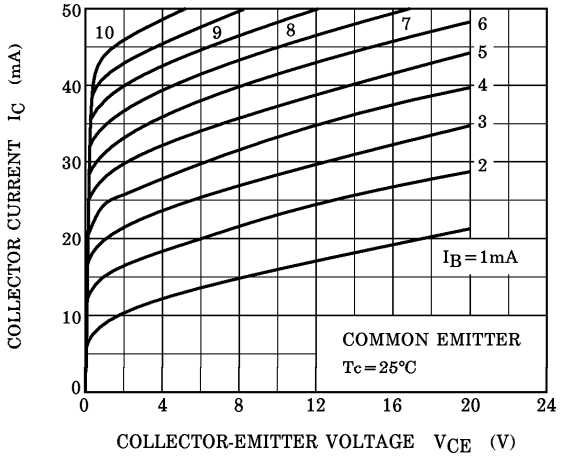
MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	1500	V
Collector-Emitter Voltage	2SC4686	V_{CEO}	1000	V
	2SC4686A		1200	
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	50	mA
	Pulse	I_{CP}	100	
Base Current		I_B	25	mA
Collector Power Dissipation	Tc = 25°C	P_C	10	W
	Ta = 25°C		2	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

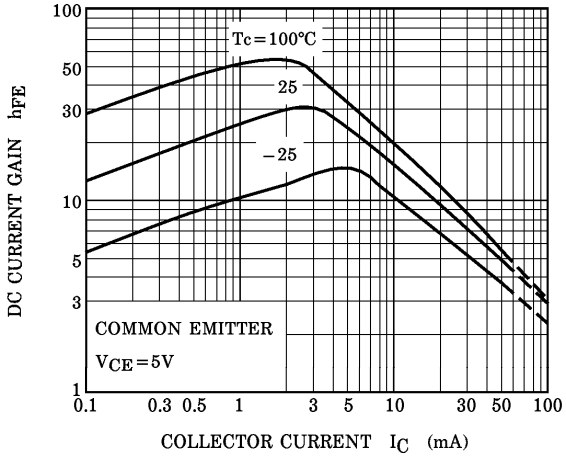
ELECTRICAL CHARACTERISTICS (Tc = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB} = 1200V, I_E = 0	—	—	1.0	μA
Emitter Cut-off Current		I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	10	μA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	I_C = 100μA, I_E = 0	1500	—	—	V
Collector-Emitter Breakdown Voltage	2SC4686	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	1000	—	—	V
	2SC4686A			1200	—	—	
DC Current Gain		h_{FE}	V_{CE} = 5V, I_C = 3mA	15	—	60	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C = 10mA, I_B = 2mA	—	0.16	1.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C = 10mA, I_B = 2mA	—	0.7	1.5	V
Transition Frequency		f_T	V_{CE} = 10V, I_C = 3mA	—	5.5	—	MHz
Collector Output Capacitance		C_{ob}	V_{CB} = 100V, f = 1MHz, I_E = 0	—	2.2	—	pF

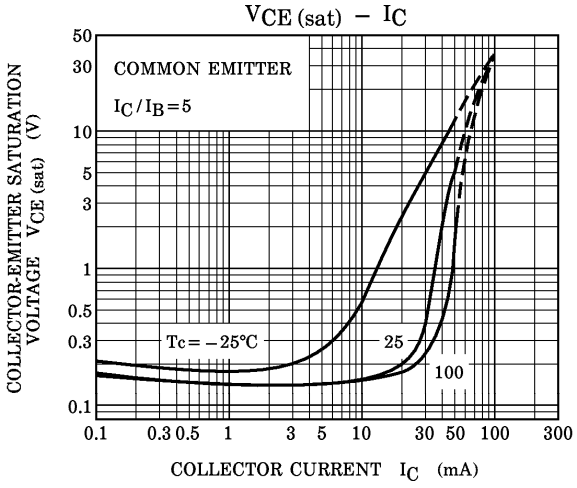
I_C – V_{CE}



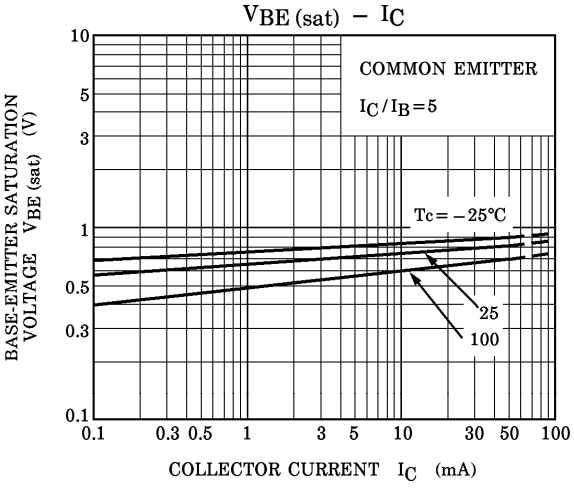
h_{FE} – I_C



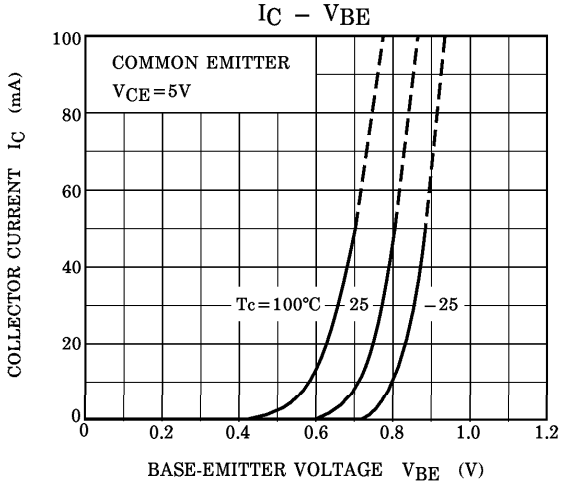
$V_{CE\,(sat)}$ – I_C



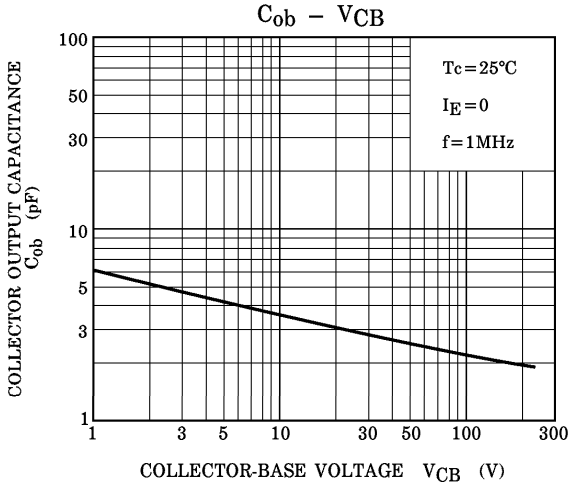
$V_{BE\,(sat)}$ – I_C



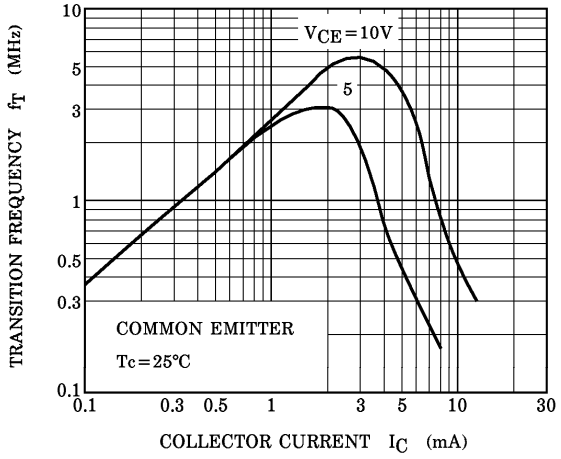
I_C – V_{BE}



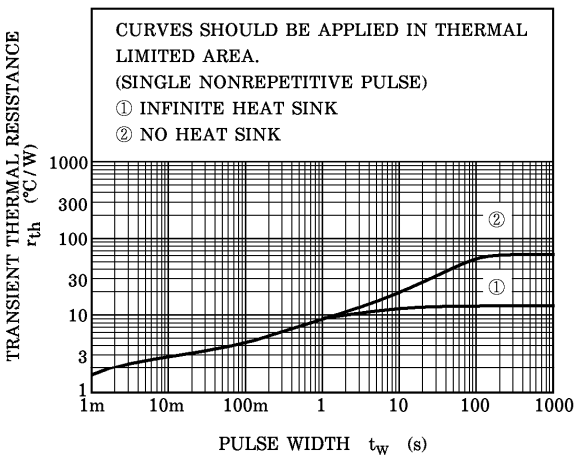
C_{ob} – V_{CB}



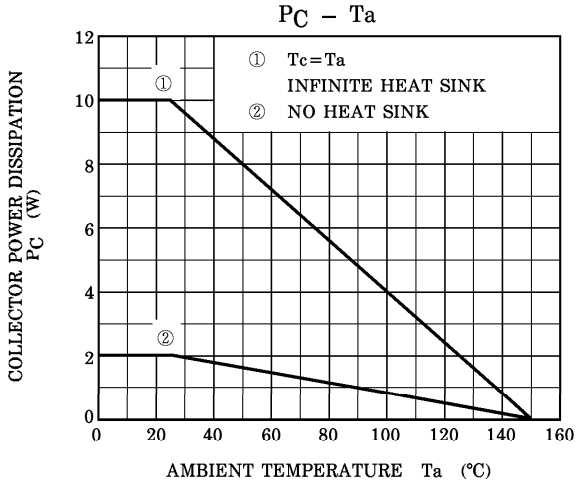
$f_T - I_C$



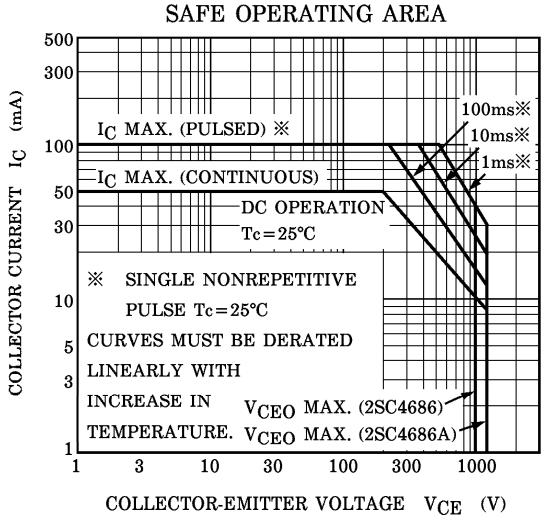
$r_{th} - t_w$



$P_C - Ta$



SAFE OPERATING AREA



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