

TOSHIBA Transistor Silicon NPN Triple Diffused Planar Type

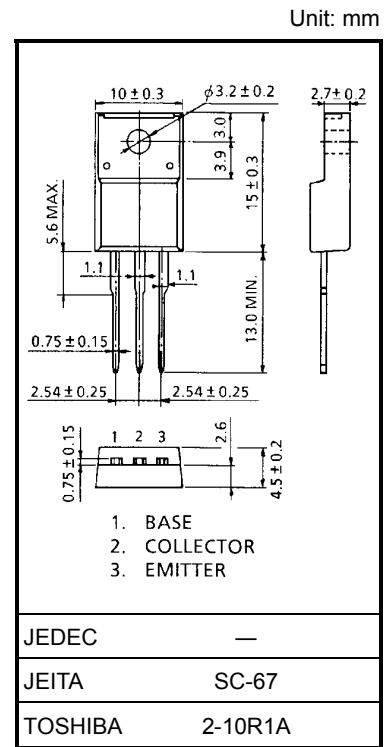
2SC4686, 2SC4686A

TV Dynamic Focus Applications
 High-Voltage Switching Applications
 High-Voltage Amplifier Applications

- High voltage: $V_{CEO} = 1200\text{ V (max)}$
- Small collector output capacitance: $C_{ob} = 2.2\text{ pF (typ.) (}V_{CB} = 100\text{ V)}$

Maximum Ratings ($T_c = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	1500	V
Collector-emitter voltage	V_{CEO}	2SC4686	1000
		2SC4686A	1200
Emitter-base voltage	V_{EBO}	5	V
Collector current	DC	I_C	50
	Pulse	I_{CP}	100
Base current	I_B	25	mA
Collector power dissipation	P_C	$T_c = 25^\circ\text{C}$	10
		$T_a = 25^\circ\text{C}$	2
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$

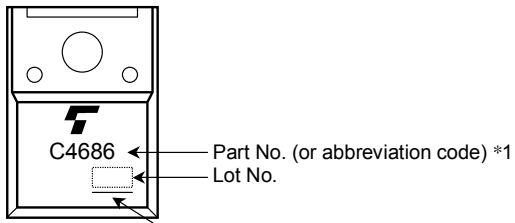


Weight: 1.7 g (typ.)

Electrical Characteristics ($T_c = 25^\circ\text{C}$)

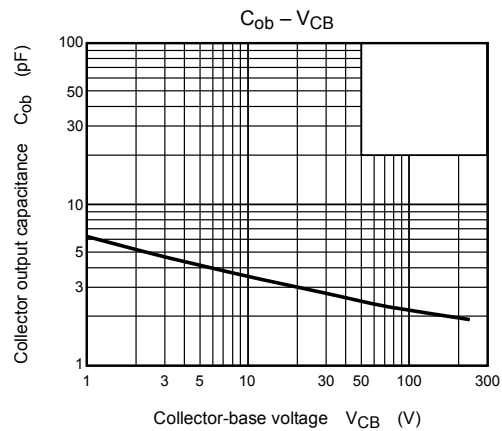
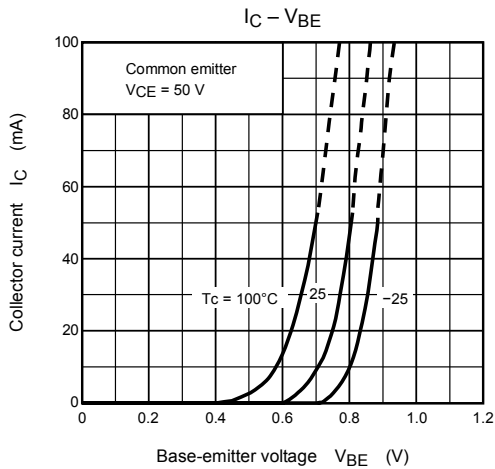
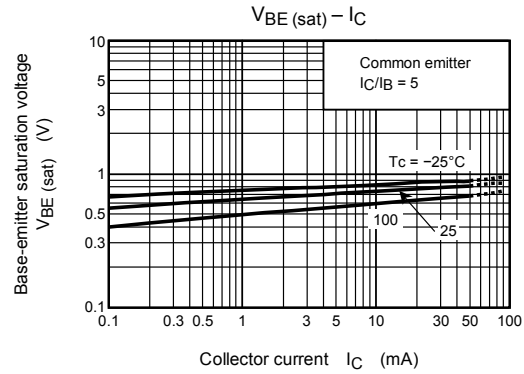
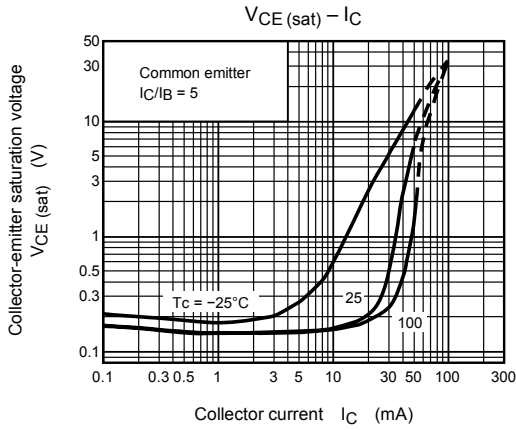
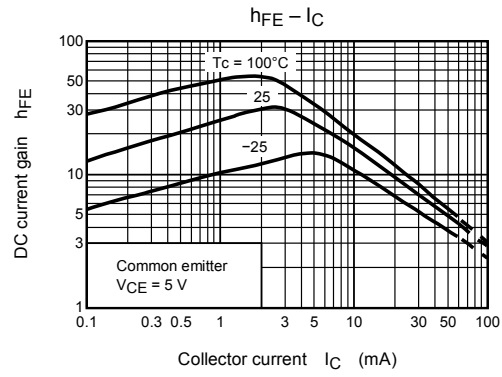
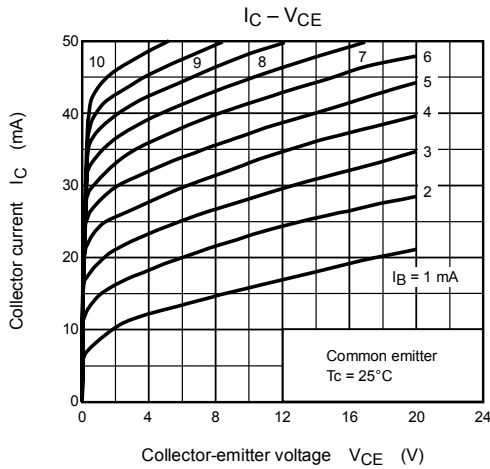
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 1200\text{ V, }I_E = 0$	—	—	1.0	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V, }I_C = 0$	—	—	10	μA
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\text{ }\mu\text{A, }I_E = 0$	1500	—	—	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{ mA, }I_B = 0$	2SC4686	1000	—	—
			2SC4686A	1200	—	—
DC current gain	h_{FE}	$V_{CE} = 5\text{ V, }I_C = 3\text{ mA}$	15	—	60	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{ mA, }I_B = 2\text{ mA}$	—	0.16	1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10\text{ mA, }I_B = 2\text{ mA}$	—	0.7	1.5	V
Transition frequency	f_T	$V_{CE} = 10\text{ V, }I_C = 3\text{ mA}$	—	5.5	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 100\text{ V, }f = 1\text{ MHz, }I_E = 0$	—	2.2	—	pF

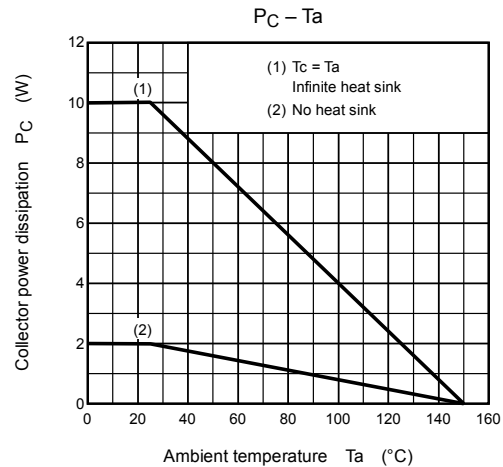
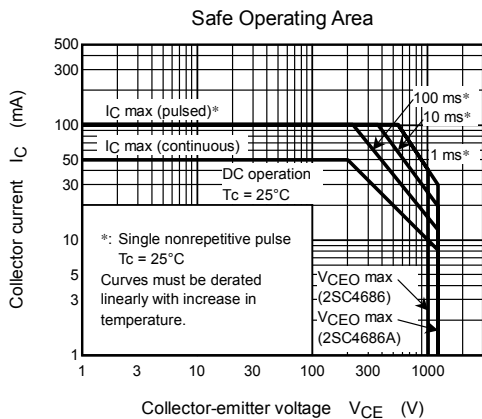
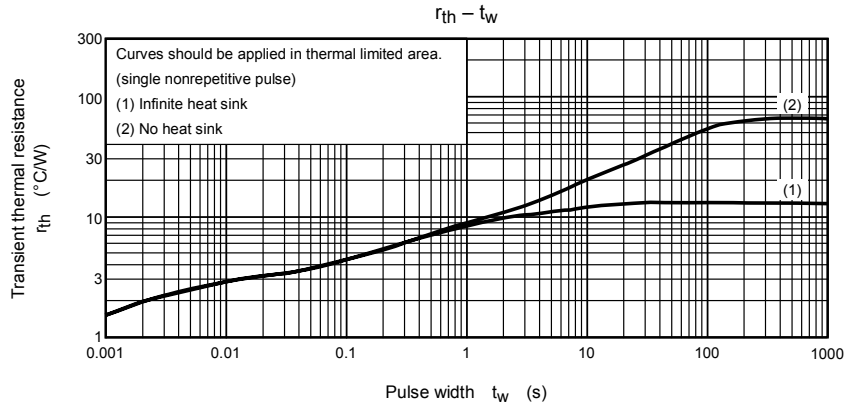
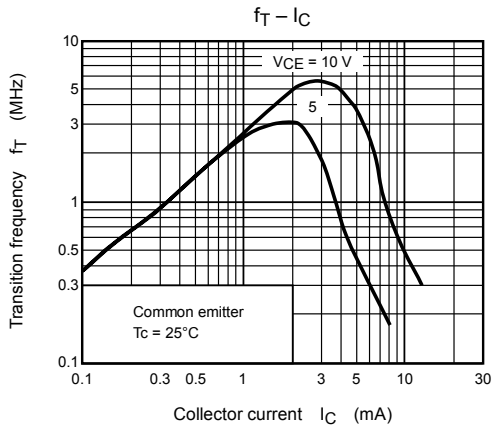
Marking



A line indicates
lead (Pb)-free package or
lead (Pb)-free finish.

	Part No. (or abbreviation code)	Part No.
*1	C4686	2SC4686
	C4686A	2SC4686A





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