

TOSHIBA Transistor Silicon NPN Triple Diffused Planar Type

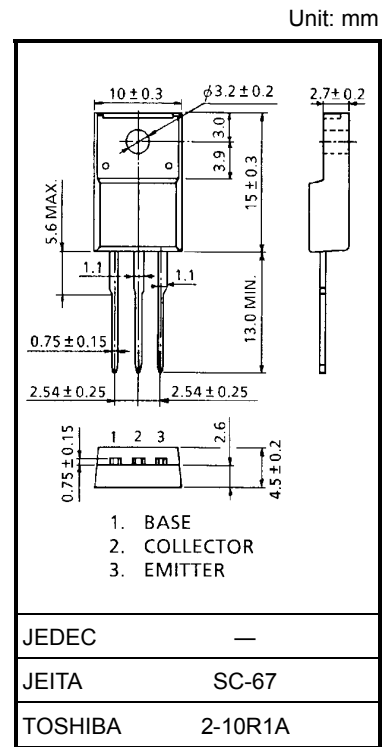
# 2SC4686, 2SC4686A

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	$^\circ\text{C}$

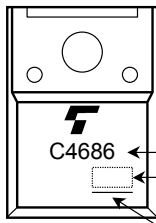


Weight: 1.7 g (typ.)

### 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	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{ V, }I_C = 0$	—	—	10	$\mu\text{A}$
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

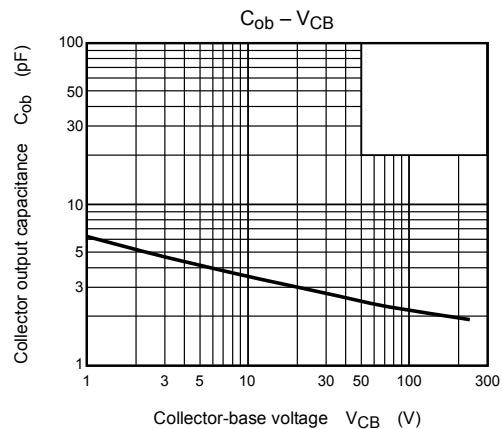
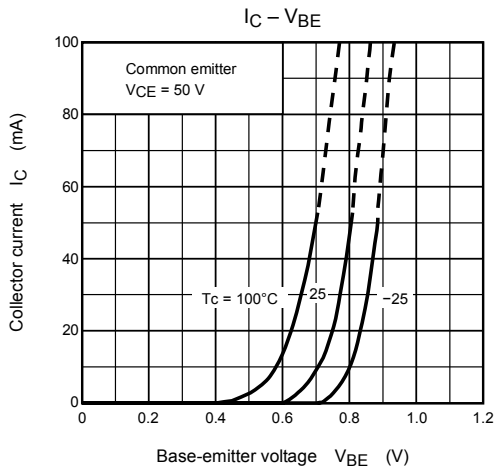
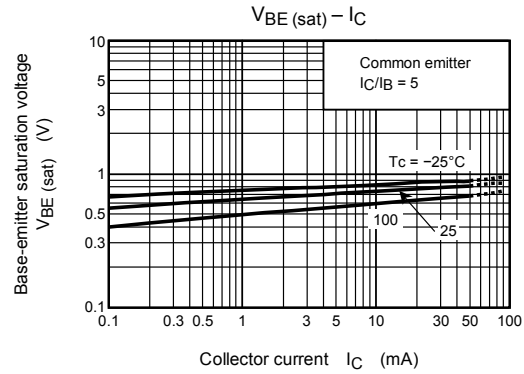
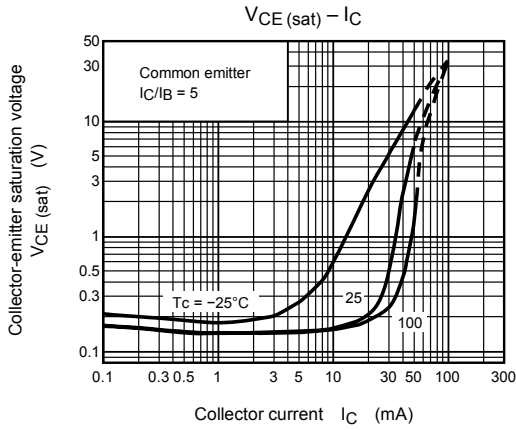
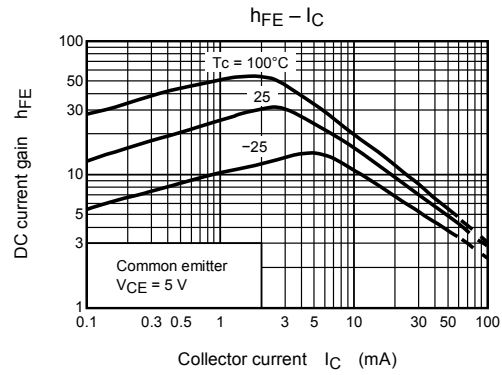
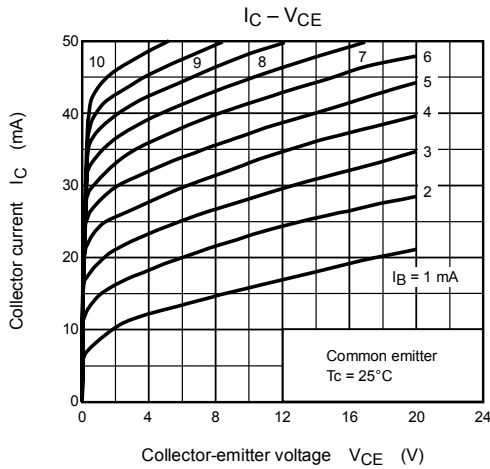
## Marking

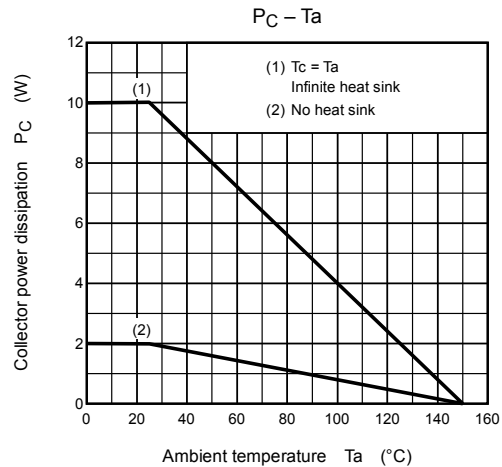
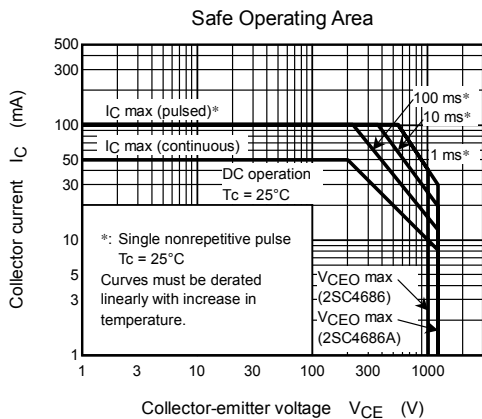
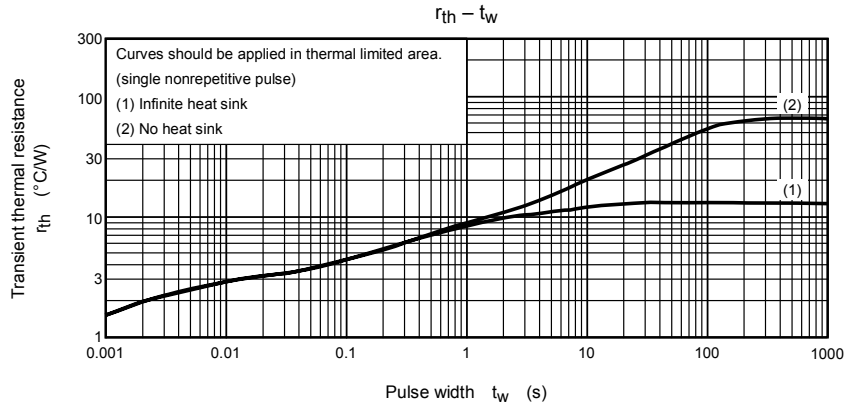
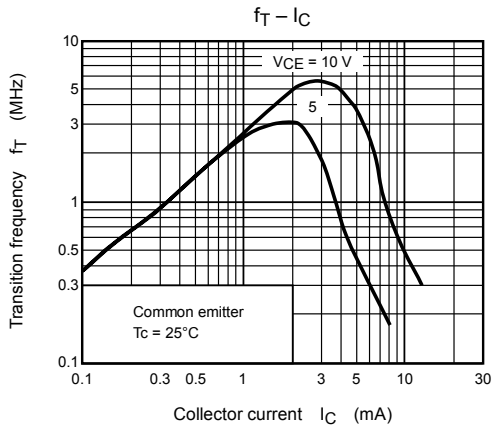


C4686 ← Part No. (or abbreviation code) \*1  
          ← Lot No.

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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