

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2SC4667

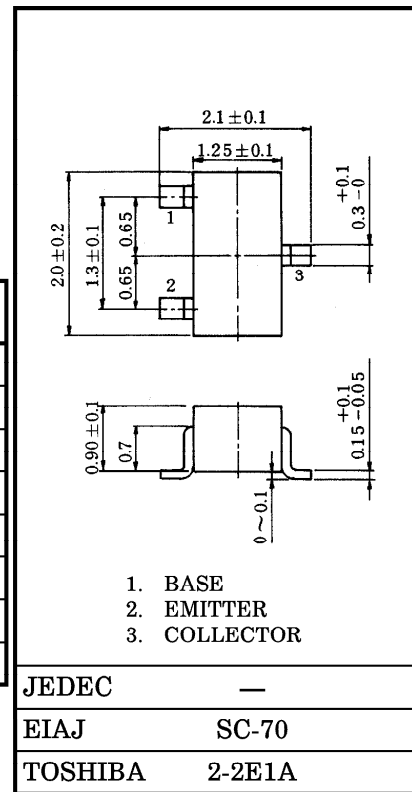
ULTRA HIGH SPEED SWITCHING APPLICATIONS.  
COMPUTER, COUNTER APPLICATIONS.

Unit in mm

- High Transition Frequency :  $f_T = 400\text{MHz}$  (Typ.)
- Low Saturation Voltage :  $V_{CE(sat)} = 0.3\text{V}$  (Max.)
- High Speed Switching Time :  $t_{stg} = 15\text{ns}$  (Typ.)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	15	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	200	mA
Base Current	$I_B$	40	mA
Collector Power Dissipation	$P_C$	100	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ\text{C}$



Weight : 0.006g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 40V, I_E = 0$	—	—	0.1	$\mu A$	
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	—	—	0.1	$\mu A$	
DC Current Gain	$h_{FE(1)}$ (Note 1)	$V_{CE} = 1V, I_C = 10mA$	40	—	240		
	$h_{FE(2)}$	$V_{CE} = 1V, I_C = 100mA$	20	—	—		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 20mA, I_B = 1mA$	—	—	0.3	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 20mA, I_B = 1mA$	—	—	1.0	V	
Transition Frequency	$f_T$	$V_{CE} = 10V, I_C = 10mA$	200	400	—	MHz	
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	4	6	pF	
Switching Time	Turn-on Time	$t_{on}$	(Note 2)	—	70	—	ns
	Storage Time	$t_{stg}$		—	15	—	
	Turn-off Time	$t_{off}$		—	30	—	

Note 1 :  $h_{FE(1)}$  Classification    R : 40~80, O : 70~140, Y : 120~240

Note 2 : SWITCHING TIME TEST CIRCUIT

