

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC752[®]TM

ULTRA HIGH SPEED SWITCHING APPLICATIONS

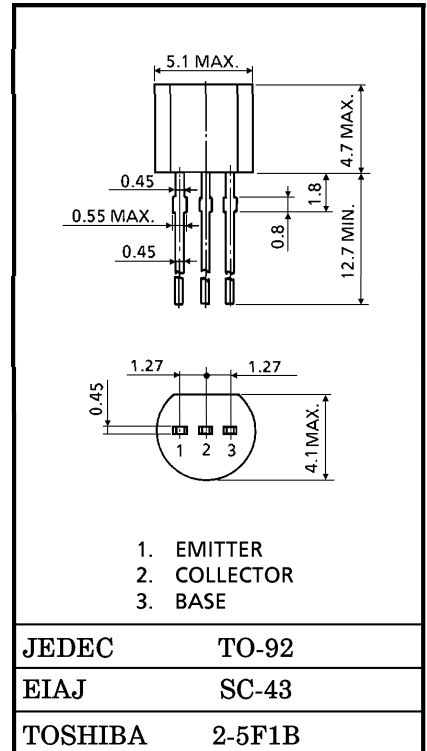
COMPUTER, COUNTER APPLICATIONS

- 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	400	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~125	$^\circ\text{C}$

Unit in mm



Weight : 0.21g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 40V, I _E = 0	—	—	0.1	μA
Emitter Cut-off Current		IEBO	V _{EB} = 5V, I _C = 0	—	—	0.1	μA
DC Current Gain		h _{FE} (1) (Note)	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}	<p>DUTY CYCLE ≤ 2%</p>	—	70	100	ns
	Storage Time	t _{stg}		—	15	30	
	Fall Time	t _f		—	30	70	

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