

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5549

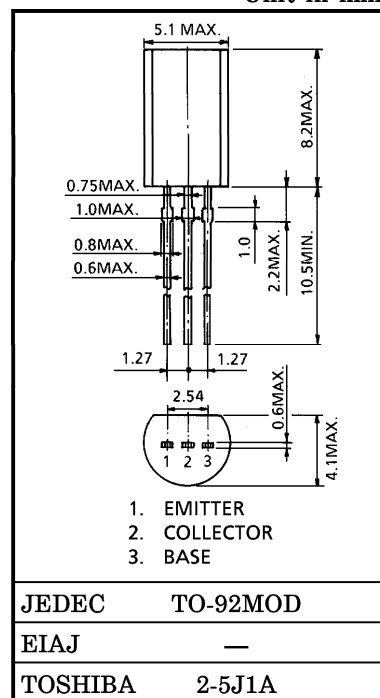
HIGH SPEED SWITCHING APPLICATION FOR INVERTER LIGHTING SYSTEM

Unit in mm

- Suitable for  $R_{CC}$  Circuit. (Guaranteed small current  $h_{FE}$ )  
:  $h_{FE} = 13$  (Min.) ( $I_C = 1\text{mA}$ )
- High Speed :  $t_r = 0.5\mu\text{s}$  (Max.),  $t_f = 0.3\mu\text{s}$  (Max.) ( $I_C = 0.24\text{A}$ )
- High Voltage :  $V_{CEO} = 400\text{V}$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	400	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	7	V
Collector Current	DC	$I_C$	1
	Pulse	$I_{CP}$	2
Base Current	$I_B$	0.5	A
Collector Power Dissipation	$P_C$	0.9	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$



Weight : 0.36g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V <sub>CB</sub> = 320V, I <sub>E</sub> = 0	—	—	100	μA
Emitter Cut-off Current		IEBO	V <sub>EB</sub> = 7V, I <sub>C</sub> = 0	—	—	100	μA
Collector-Base Breakdown Voltage		V <sub>(BR)</sub> CBO	I <sub>C</sub> = 1mA, I <sub>B</sub> = 0	400	—	—	V
Collector-Emitter Breakdown Voltage		V <sub>(BR)</sub> CEO	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0	400	—	—	V
DC Current Gain		h <sub>FE</sub> (1)	V <sub>CE</sub> = 5V, I <sub>C</sub> = 1mA	13	—	—	
		h <sub>FE</sub> (2)	V <sub>CE</sub> = 5V, I <sub>C</sub> = 0.04A	20	—	65	
Collector-Emitter Saturation Voltage		V <sub>CE</sub> (sat)	I <sub>C</sub> = 0.2A, I <sub>B</sub> = 25mA	—	—	1.0	V
Base-Emitter Saturation Voltage		V <sub>BE</sub> (sat)	I <sub>C</sub> = 0.2A, I <sub>B</sub> = 25mA	—	—	1.3	V
Switching Time	Rise Time	t <sub>r</sub>	<p> <math>20\mu s</math> <math>V_{CC} = 200V</math>  <math>I_{B1}</math> <math>I_{B2}</math> <math>I_C</math> <math>833\Omega</math>                      INPUT OUTPUT                 </p>	—	—	0.5	μs
	Storage Time	t <sub>stg</sub>		—	—	5.0	
	Fall Time	t <sub>f</sub>		$I_{B1} = 0.03A, I_{B2} = -0.06A$ DUTY CYCLE ≤ 1%	—	—	

