

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SC5356

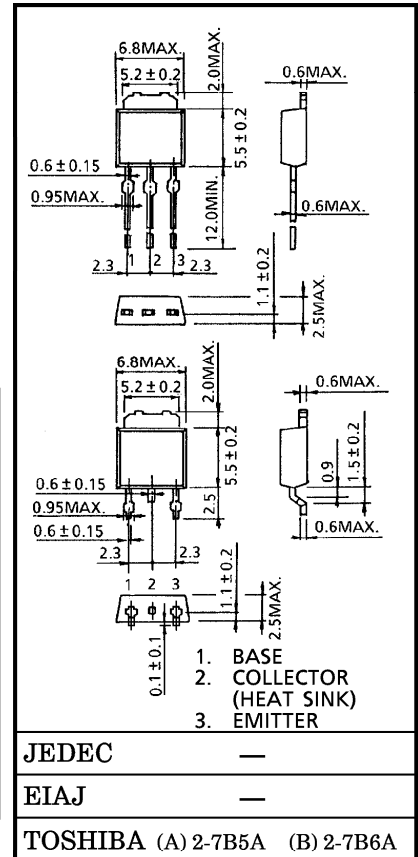
SWITCHING REGULATOR APPLICATIONS  
 HIGH VOLTAGE SWITCHING APPLICATIONS  
 DC-DC CONVERTER APPLICATIONS

- Excellent Switching Times :  $t_f = 0.5 \mu s$  (Max.) ( $I_C = 1.2 A$ )
- High Collectors Breakdown Voltage :  $V_{CEO} = 800 V$
- High DC Current Gain :  $h_{FE} = 15$  (Min.) ( $I_C = 0.15 A$ )

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	900	V
Collector-Emitter Voltage		$V_{CEO}$	800	V
Emitter-Base Voltage		$V_{EBO}$	7	V
Collector Current	DC	$I_C$	3	A
	Pulse	$I_{CP}$	5	
Base Current		$I_B$	1	A
Collector Power Dissipation	$T_a = 25^\circ C$	$P_C$	1.5	W
	$T_c = 25^\circ C$		25	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$

Unit in mm



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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> = 720 V, I <sub>E</sub> = 0	—	—	100	μA
Emitter Cut-off Current		IEBO	V <sub>EB</sub> = 7 V, I <sub>C</sub> = 0	—	—	10	μA
Collector-Base Breakdown Voltage		V <sub>(BR)CBO</sub>	I <sub>C</sub> = 1 mA, I <sub>B</sub> = 0	900	—	—	V
Collector-Emitter Breakdown Voltage		V <sub>(BR)CEO</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	800	—	—	V
DC Current Gain		h <sub>FE</sub> (1)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 mA	10	—	—	
		h <sub>FE</sub> (2)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 0.15 A	15			
Collector-Emitter Saturation Voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> = 1.2 A, I <sub>B</sub> = 0.24 A	—	—	1.0	V
Base-Emitter Saturation Voltage		V <sub>BE(sat)</sub>	I <sub>C</sub> = 1.2 A, I <sub>B</sub> = 0.24 A	—	—	1.3	V
Switching Time	Rise Time	t <sub>r</sub>	<p>20 μs V<sub>CC</sub> = 360 V              I<sub>B1</sub> I<sub>B2</sub> I<sub>C</sub> 300Ω              INPUT OUTPUT</p>	—	—	0.7	μs
	Storage Time	t <sub>stg</sub>		—	—	4.0	
	Fall Time	t <sub>f</sub>		I <sub>B1</sub> = 0.24 A, I <sub>B2</sub> = -0.48 A DUTY CYCLE ≤ 1%	—	—	

