

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5352

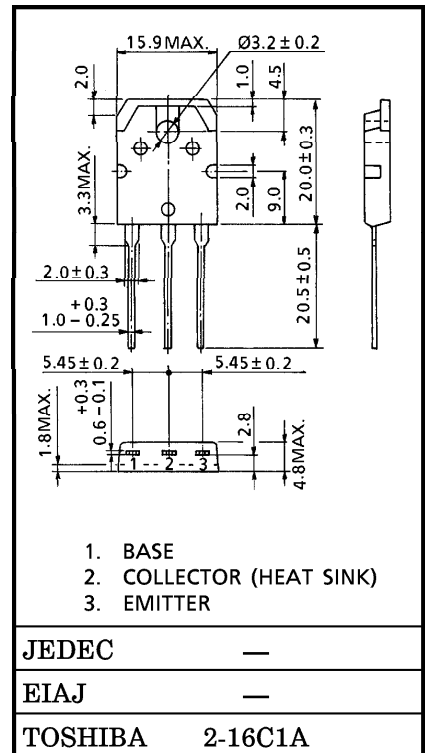
SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS  
HIGH SPEED DC-DC CONVERTER APPLICATIONS

- Excellent Switching Times  
:  $t_r = 0.5 \mu s$  (Max.),  $t_f = 0.3 \mu s$  (Max.) ( $I_C = 4 A$ )
- High Collectors Breakdown Voltage :  $V_{CEO} = 400 V$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	600	V
Collector-Emitter Voltage		$V_{CEO}$	400	V
Emitter-Base Voltage		$V_{EBO}$	7	V
Collector Current	DC	$I_C$	10	A
	Pulse	$I_{CP}$	15	
Base Current		$I_B$	5	A
Collector Power Dissipation ( $T_c = 25^\circ C$ )		$P_C$	80	W
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$

Unit in mm



Weight : 4.7 g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = 480\text{ V}, I_E = 0$	—	—	100	$\mu\text{A}$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C = 1\text{ mA}, I_E = 0$	600	—	—	V
Collector-Emmitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	400	—	—	V
DC Current Gain		$h_{FE}$	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$	20	—	—	
Collector-Emmitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 4\text{ A}, I_B = 0.5\text{ A}$	—	—	1.0	V
Base-Emmitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 4\text{ A}, I_B = 0.5\text{ A}$	—	—	1.3	V
Switching Time	Rise Time	$t_r$	<p> <math>20\ \mu\text{s}</math>  <math>V_{CC} = 200\text{ V}</math>  <math>I_C</math>  <math>100\ \Omega</math>  <math>50\ \Omega</math>                      INPUT OUTPUT  <math>I_{B1}</math>  <math>I_{B2}</math>  <math>I_{B1} = 0.5\text{ A}, I_{B2} = -1\text{ A}</math>  <math>\text{DUTY CYCLE} \leq 1\%</math> </p>	—	—	0.5	$\mu\text{s}$
	Storage Time	$t_{stg}$		—	—	2.0	
	Fall Time	$t_f$		—	—	0.3	

