

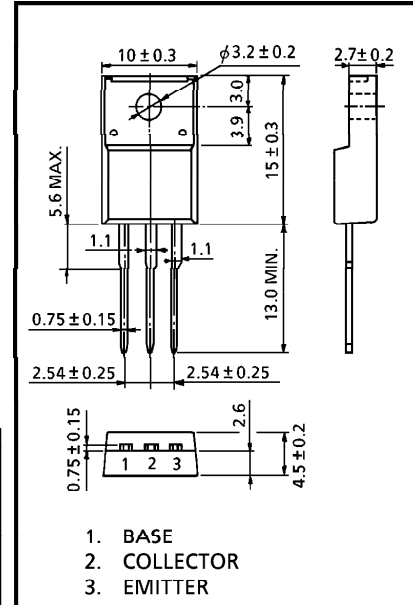
TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SC5353

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

Unit in mm

- Excellent Switching Times  
:  $t_r = 0.7\mu s$  (Max.),  $t_f = 0.5\mu s$  (Max.)
- High Collectors Breakdown Voltage :  $V_{CEO} = 800V$



JEDEC	—
EIAJ	SC-67
TOSHIBA	2-10R1A

Weight : 1.7g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	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	Ta = 25°C	$P_C$	2.0	W
	Tc = 25°C		25	
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55~150	°C

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = 720V, I_E = 0$	—	—	100	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = 7V, I_C = 0$	—	—	10	$\mu A$
Collector-Base Breakdown Voltage		$V_{(BR) CBO}$	$I_C = 1mA, I_E = 0$	900	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = 10mA, I_B = 0$	800	—	—	V
DC Current Gain		$h_{FE} (1)$	$V_{CE} = 5V, I_C = 1mA$	10	—	—	
		$h_{FE} (2)$	$V_{CE} = 5V, I_C = 0.15A$	15			
Collector-Emitter Saturation Voltage		$V_{CE} (sat)$	$I_C = 1.2A, I_B = 0.24A$	—	—	1.0	V
Base-Emitter Saturation Voltage		$V_{BE} (sat)$	$I_C = 1.2A, I_B = 0.24A$	—	—	1.3	V
Switching Time	Rise Time	$t_r$		—	—	0.7	$\mu s$
	Storage Time	$t_{stg}$		—	—	4.0	
	Fall Time	$t_f$		$I_{B1} = 0.24A, I_{B2} = -0.48A$ DUTY CYCLE $\leq 1\%$	—	—	

