

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5354

HIGH SPEED AND HIGH VOLTAGE SWITCHING APPLICATIONS

SWITCHING REGULATOR APPLICATIONS

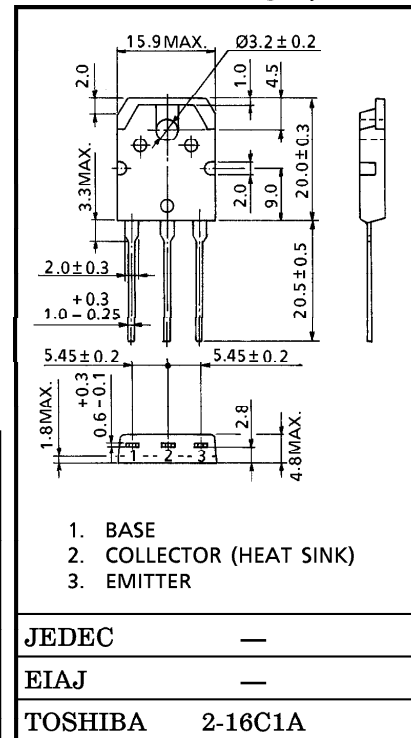
HIGH SPEED DC-DC CONVERTER APPLICATIONS

- Excellent Switching Times : $t_r = 0.7\mu s$ (Max.)
 $t_f = 0.5\mu s$ (Max.) ($I_C = 2A$)
- High Collector Breakdown Voltage : $V_{CEO} = 800V$

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

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	5	A
	Pulse	I_{CP}	10	
Base Current		I_B	2	A
Collector Power Dissipation ($T_c = 25^\circ C$)		P_C	100	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$

Unit in mm



Weight : 4.7g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 800V, I_E = 0$	—	—	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 7V, I_C = 0$	—	—	1	mA
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		$h_{FE (1)}$	$V_{CE} = 5V, I_C = 10mA$	10	—	—	
		$h_{FE (2)}$	$V_{CE} = 5V, I_C = 0.5A$	15	—	—	
Collector-Emitter Saturation Voltage		$V_{CE (sat)}$	$I_C = 2A, I_B = 0.4A$	—	—	1.0	V
Base-Emitter Saturation Voltage		$V_{BE (sat)}$	$I_C = 2A, I_B = 0.4A$	—	—	1.3	V
Switching Time	Rise Time	t_r	<p> $20\mu s$ $V_{CC} \cong 400V$ I_{B1} I_{B2} $I_C = 4A$ $I_{B1} = 0.4A$ $I_{B2} = -0.8A$ DUTY CYCLE $\leq 1\%$ </p>	—	—	0.7	μs
	Storage Time	t_{stg}		—	—	4.0	
	Fall Time	t_f		—	—	0.5	