

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC4754

HIGH VOLTAGE SWITCHING APPLICATIONS

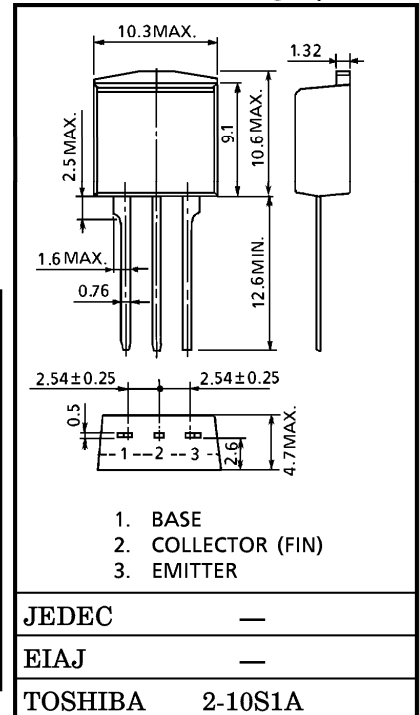
HIGH SPEED DC-DC CONVERTER AND SWITCHING REGULATOR APPLICATIONS

INDUSTRIAL APPLICATIONS
Unit in mm

- Excellent Switching Times
: $t_r = 1.0 \mu s$ (MAX.) $t_f = 1.0 \mu s$ (MAX.), ($I_C = 0.8 A$)
- High Collector 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	I_C	2	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	$T_a = 25^\circ C$	1.5
		$T_c = 25^\circ C$	20
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Weight : 1.5 g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 600 V, I_E = 0$	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 7 V, I_C = 0$	—	—	1	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1 mA, I_E = 0$	600	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10 mA, I_B = 0$	400	—	—	V
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 5 V, I_C = 0.1 A$	20	—	—	
	$h_{FE}(2)$	$V_{CE} = 5 V, I_C = 1 A$	8	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1 A, I_B = 0.2 A$	—	—	1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1 A, I_B = 0.2 A$	—	—	1.5	V
Switching Time	Rise Time	t_r	—	—	1.0	μs
	Storage Time	t_{stg}	—	—	2.5	
	Fall Time	t_f	—	—	1.0	

$I_{B1} = -I_{B2} = 0.08 A, V_{CE} = 200 V$
DUTY CYCLE $\leq 1\%$

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