TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5354

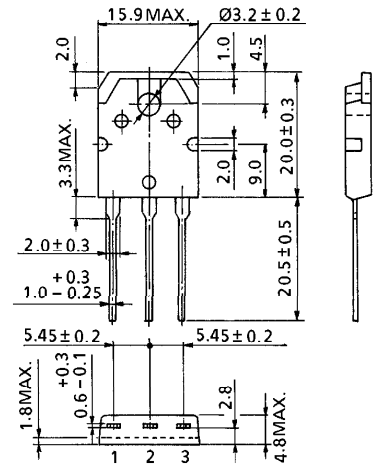
HIGH SPEED AND HIGH VOLTAGE SWITCHING APPLICATIONS

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 : $V_{CEO} = 800V$

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

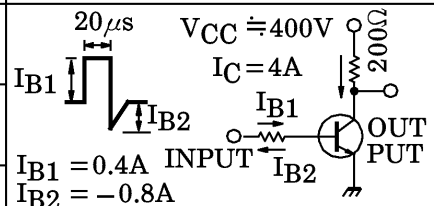
JEDEC	—
JEITA	—
TOSHIBA	2-16C1A

Weight : 4.7g (Typ.)

MAXIMUM RATINGS (Tc = 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	5	A
	Pulse	I_{CP}	10	
Base Current		I_B	2	A
Collector Power Dissipation (Tc = 25°C)		P_C	100	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Tc = 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	 I_{B1} = 0.4A I_{B2} = −0.8A DUTY CYCLE ≦ 1%	—	—	0.7	μs
	Storage Time	t_{stg}		—	—	4.0	
	Fall Time	t_f		—	—	0.5	

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