

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5465

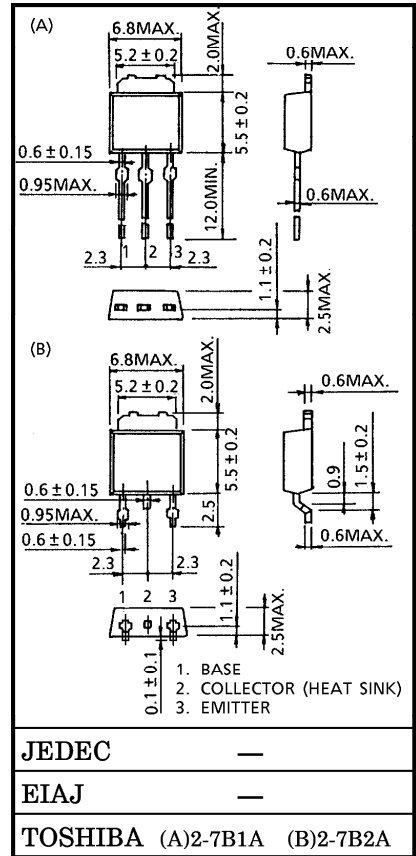
SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS

HIGH SPEED DC-DC CONVERTER APPLICATIONS

INDUSTRIAL APPLICATIONS

Unit in mm

- Excellent Switching Times ( $I_C = 0.08\text{ A}$ )  
:  $t_r = 0.7\ \mu\text{s}$  (Max.),  $t_f = 0.5\ \mu\text{s}$  (Max.)
- High Collector Breakdown Voltage :  $V_{CEO} = 800\text{ V}$



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

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	$I_C$	0.8
	Pulse	$I_{CP}$	1.5
Base Current	$I_B$	0.2	A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	$P_C$	1.0
	$T_c = 25^\circ\text{C}$		20
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$

JEDEC	—
EIAJ	—
TOSHIBA	(A)2-7B1A (B)2-7B2A

Weight : 0.36 g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = 800\text{ V}, I_E = 0$	—	—	100	$\mu\text{A}$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C = 1\text{ mA}, I_E = 0$	900	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	800	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$	10	—	—	
		$h_{FE(2)}$	$V_{CE} = 5\text{ V}, I_C = 0.08\text{ A}$	15	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 0.3\text{ A}, I_B = 0.06\text{ A}$	—	—	1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 0.3\text{ A}, I_B = 0.06\text{ A}$	—	—	1.3	V
Switching Time	Rise Time	$t_r$		—	—	0.7	$\mu\text{s}$
	Storage Time	$t_{stg}$		—	—	3.0	
	Fall Time	$t_f$		$I_{B1} = 0.06\text{ A}, I_{B2} = -0.12\text{ A}$ DUTY CYCLE $\leq 1\%$	—	—	

