

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC4157

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS

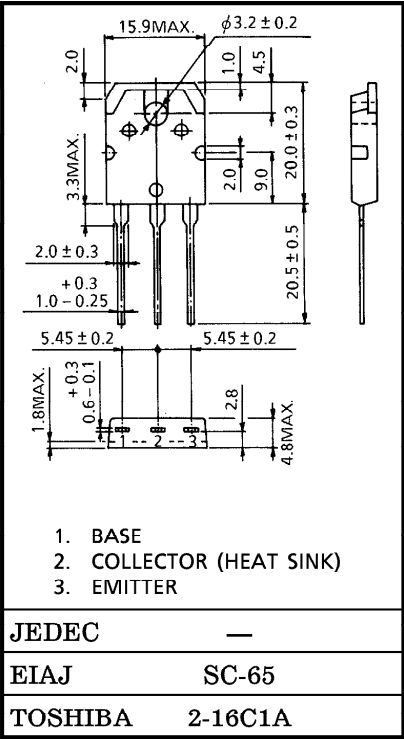
HIGH SPEED DC-DC CONVERTER APPLICATIONS

- High Speed Switching
: $t_r=0.5\mu s$ (Max.), $t_f=0.5\mu s$ (Max.) ($I_C=5A$)
- High Collector Breakdown Voltage : $V_{CEO}=450V$

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	600	V
Collector-Emitter Voltage		V_{CEO}	450	V
Emitter-Base Voltage		V_{EBO}	8	V
Collector Current	DC	I_C	10	A
	Pulse	I_{CP}	20	
Base Current		I_B	5	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

Unit in mm

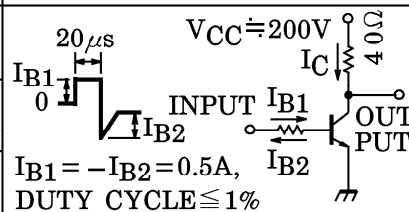


Weight : 4.7g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 500V, I _E = 0	—	—	100	μA
Emitter Cut-off Current		IEBO	V _{EB} = 8V, I _C = 0	—	—	1	mA
Collector-Base Breakdown Voltage		V (BR) CBO	I _C = 1mA, I _E = 0	600	—	—	V
Collector-Emitter Breakdown Voltage		V (BR) CEO	I _C = 10mA, I _B = 0	450	—	—	V
DC Current Gain		h _{FE}	V _{CE} = 5V, I _C = 5A	15	—	—	
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I _C = 5A, I _B = 1A	—	—	1.0	V
Base-Emitter Saturation Voltage		V _{BE} (sat)	I _C = 5A, I _B = 1A	—	—	2.0	V
Switching Time	Turn-on Time	t _r	 V_{CC} = 200V I_C = 40Ω I_{B1} = 0.5A I_{B2} = -0.5A DUTY CYCLE ≤ 1%	—	—	0.5	μs
	Storage Time	t _{stg}		—	—	2.5	
	Fall Time	t _f		—	—	0.5	