

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5307

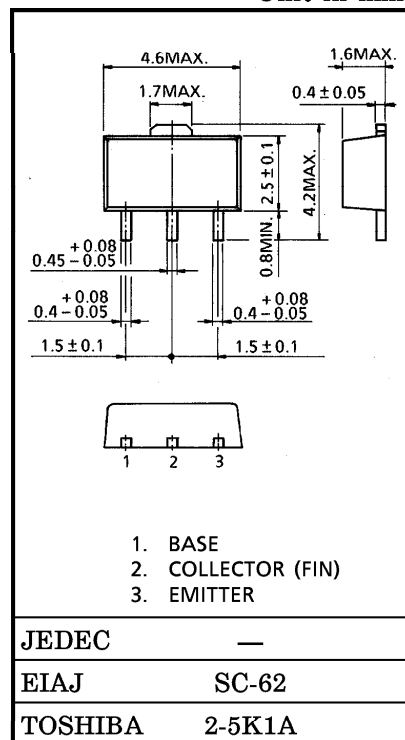
HIGH VOLTAGE SWITCHING APPLICATIONS

Unit in mm

- High Voltage :  $V_{CEO} = 400V$
- Low Saturation Voltage :  $V_{CE(sat)} = 0.4V$  (Typ.) ( $I_C = 20mA, I_B = 0.5mA$ )

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	400	V
Collector-Emitter Voltage		$V_{CEO}$	400	V
Emitter-Base Voltage		$V_{EB0}$	7	V
Collector Current	DC	$I_C$	50	mA
	Pulse	$I_{CP}$	100	
Base Current		$I_B$	25	mA
Collector Power Dissipation	$T_a = 25^\circ C$	$P_C$	500	mW
	$T_a = 25^\circ C$ (Note)		1000	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



(Note) : Mounted on Ceramic Substrate (250mm<sup>2</sup> × 0.8t)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CB0}$	$V_{CB} = 400V, I_E = 0$	—	—	1	$\mu A$
Emitter Cut-off Current	$I_{EB0}$	$V_{EB} = 7V, I_C = 0$	—	—	1	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{CEO}$	$I_C = 1mA, I_B = 0$	400	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1mA$	80	—	—	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 20mA$	100	—	300	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 20mA, I_B = 0.5mA$	—	0.4	1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = 5V, I_C = 20mA$	—	0.7	0.85	V
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	4.0	—	pF

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