

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5307

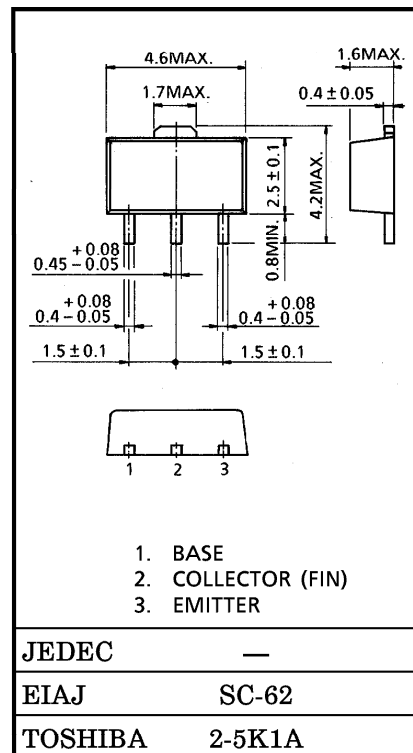
HIGH VOLTAGE SWITCHING APPLICATIONS

Unit in mm

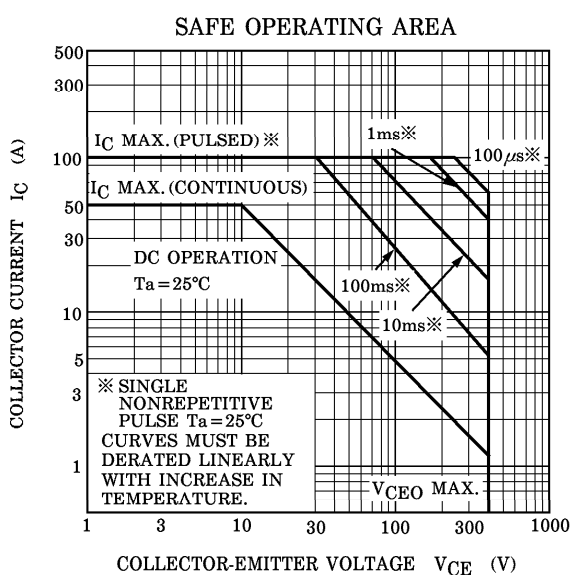
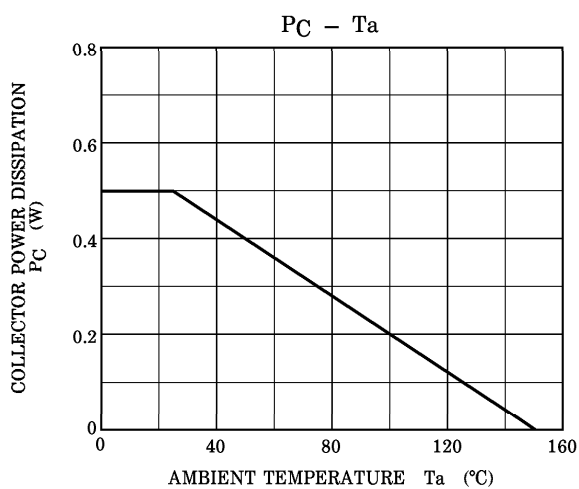
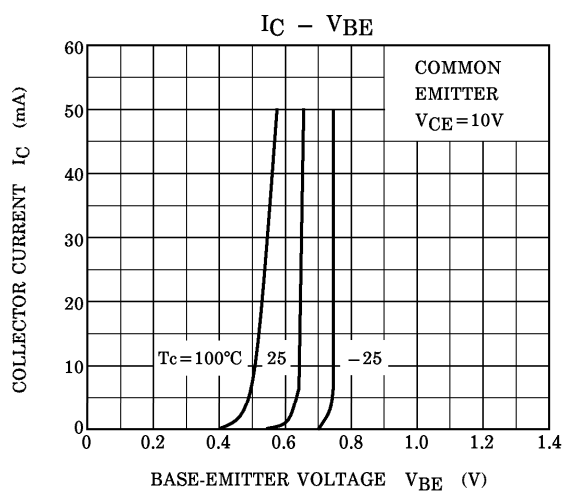
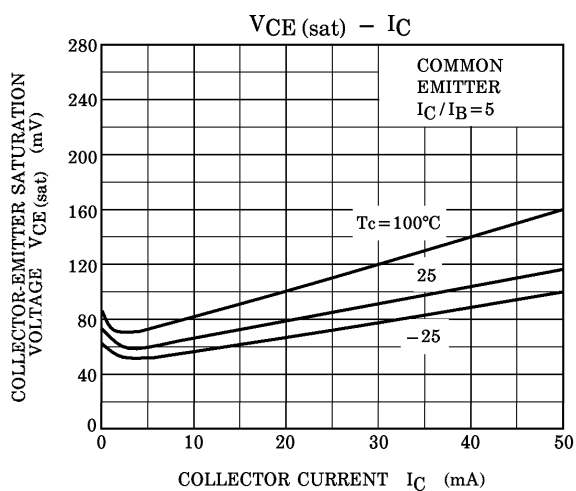
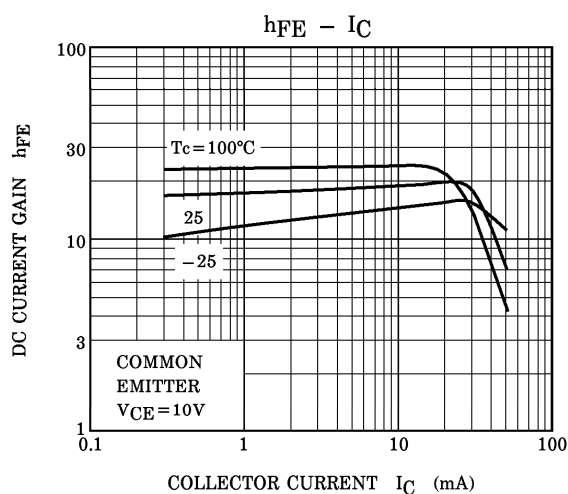
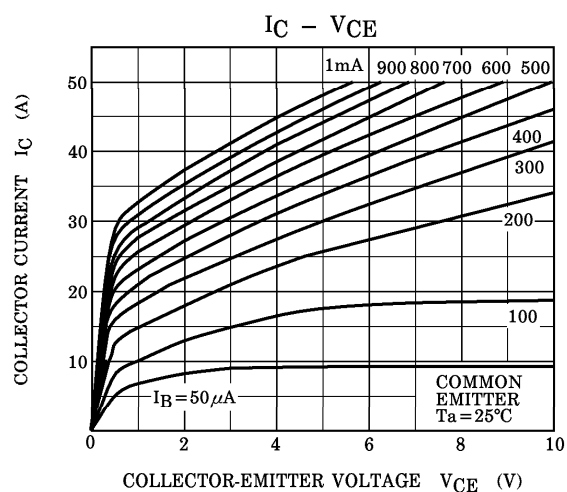
- High Voltage : $V_{CEO} = 400V$
- Low Saturation Voltage
: $V_{CE(sat)} = 0.4V$ (Typ.) ($I_C = 20mA$, $I_B = 0.5mA$)

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

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

(Note) : Mounted on Ceramic Substrate ($250mm^2 \times 0.8t$)ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 400V$, $I_E = 0$	—	—	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 7V$, $I_C = 0$	—	—	1	μA
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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