

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE (PCT PROCESS)

2SC4539

POWER AMPLIFIER APPLICATIONS

POWER SWITCHING APPLICATIONS

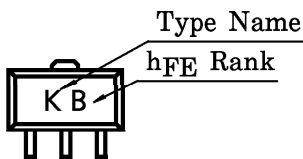
- Low Saturation Voltage : $V_{CE(sat)} = 0.5V$ (Max.)
($I_C = 700mA$)
- High Speed Switching Time : $t_{stg} = 0.3\mu s$ (Typ.)
- Small Flat Package
- $P_C = 1\sim 2W$ (Mounted on Ceramic Substrate)
- Complementary to 2SA1734

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

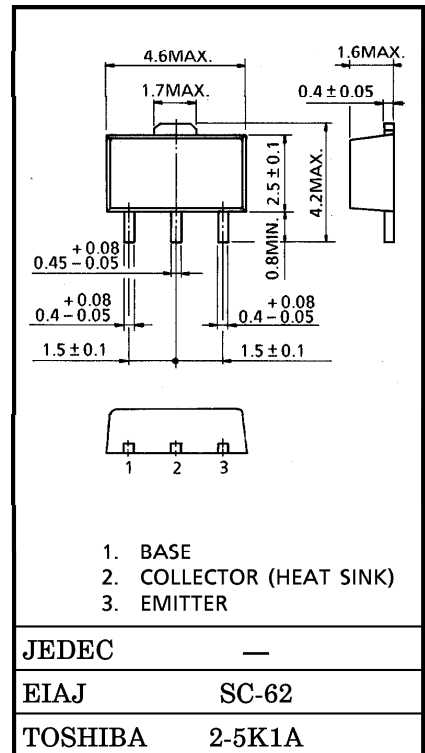
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	1.2	A
Base Current	I_B	0.3	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_C (Note)	1000	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

(Note) : Mounted on ceramic substrate ($250mm^2 \times 0.4t$)

MARKING



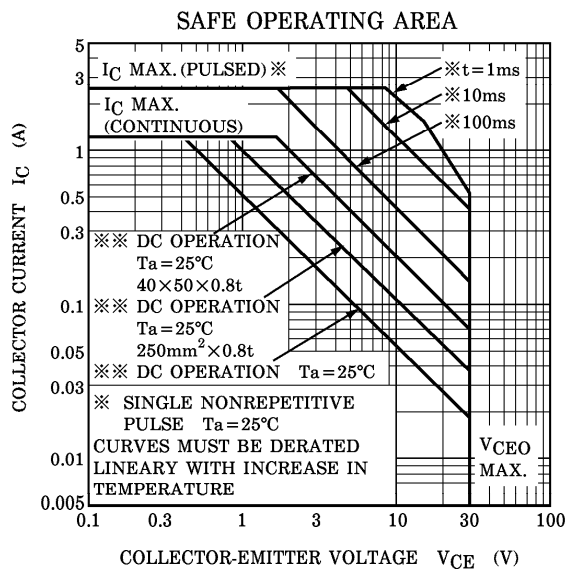
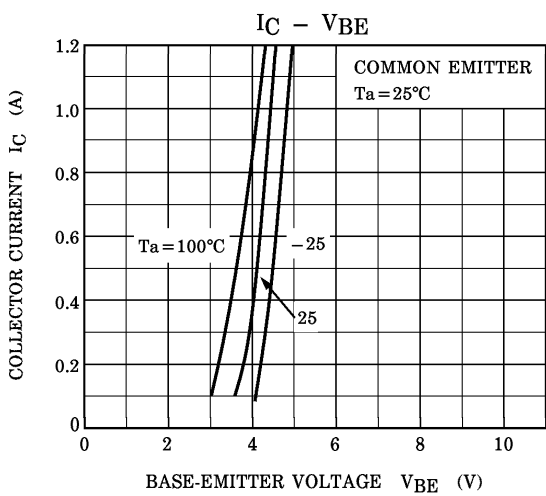
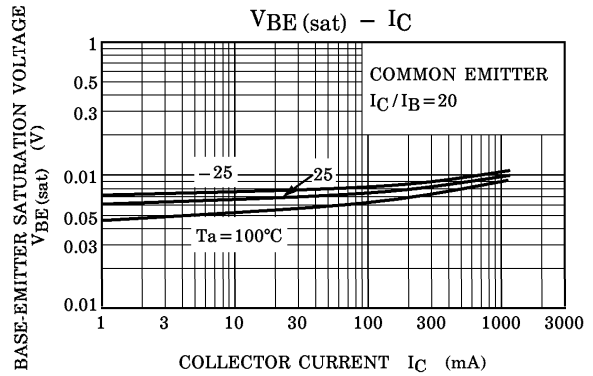
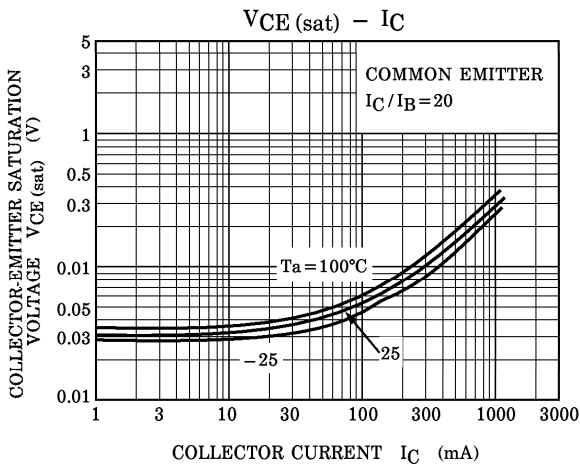
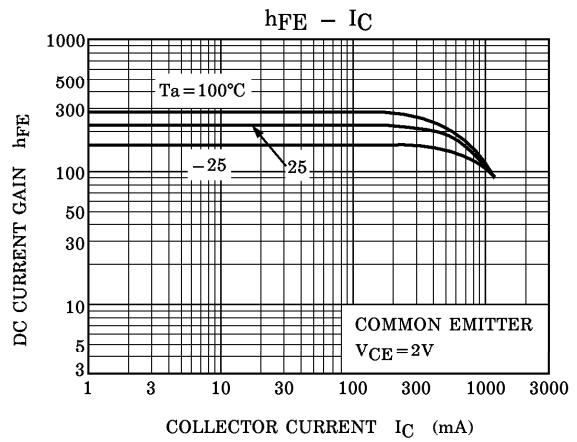
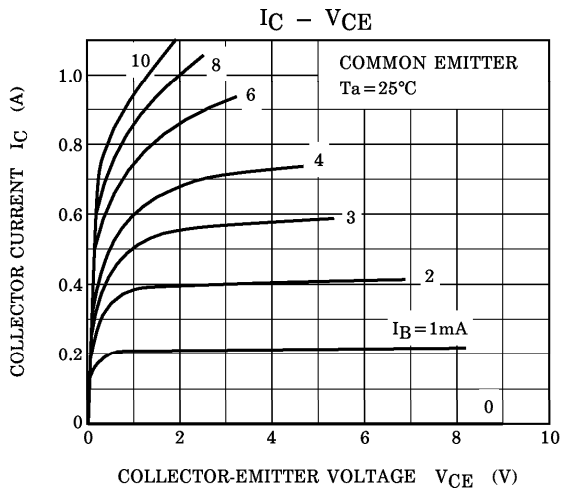
Unit in mm

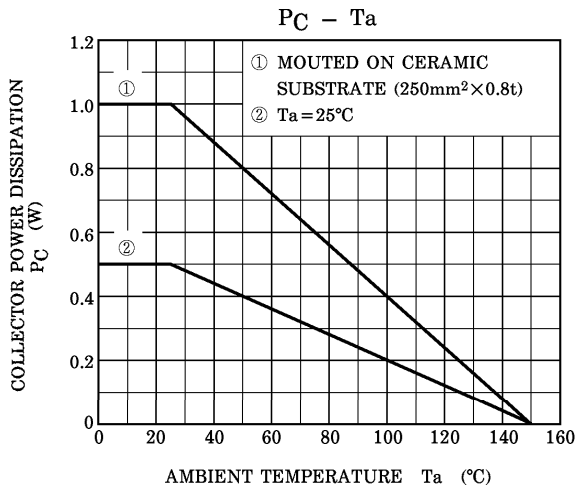


Weight : 0.05g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 50V, I _E = 0	—	—	0.1	μA
Emitter Cut-off Current		IEBO	V _{EB} = 6V, I _C = 0	—	—	0.1	μA
Collector-Emitter Breakdown Voltage		V (BR) CEO	I _C = 10mA, I _B = 0	30	—	—	V
DC Current Gain	h _{FE} (1)		V _{CE} = 2V, I _C = 100mA	120	—	400	
	h _{FE} (2)		V _{CE} = 2V, I _C = 1.0A	40	—	—	
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I _C = 700mA, I _B = 35mA	—	—	0.5	V
Base-Emitter Saturation Voltage		V _{BE} (sat)	I _C = 700mA, I _B = 35mA	—	—	1.2	V
Transition Frequency		f _T	V _{CE} = 2V, I _C = 100mA	—	100	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	10	—	pF
Switching Time	Turn-on Time	t _{on}	<p>20 μs I_{B1} INPUT I_{B2} OUTPUT 20 Ω 14V</p>	—	0.1	—	μs
	Storage Time	t _{stg}		—	0.3	—	
	Fall Time	t _f		I _{B1} = -I _{B2} = 35mA, DUTY CYCLE ≤ 1%	—	0.1	





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