Unit: mm

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC4541

Power Amplifier Applications Power Switching Applications

- Low saturation voltage: $V_{CE (sat)} = 0.5 \text{ V (max) (IC} = 1.5 \text{ A)}$
- High speed switching time: $t_{stg} = 0.5 \mu s$ (typ.)
- Small flat package
- $P_C = 1.0$ to 2.0 W (mounted on ceramic substrate)
- Complementary to 2SA1736

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V _{EBO}	6	V
Collector current	IC	3	Α
Base current	Ι _Β	0.6	Α
Collector power dissipation	P _C	500	mW
Collector power dissipation	P _C (Note)	1000	mW
Junction temperature	Tj	150	°C
Storage temperature range	T _{stg}	-55 to 150	°C

Note: Mounted on ceramic substrate (250 mm² × 0.8 t)

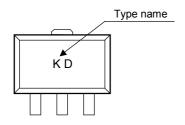
1.6MAX 4.6MAX 1.7MAX. 0.4 ± 0.05 + 0.08 0.4 - 0.05 + 0.08 0.4 - 0.05 1.5 ± 0.1 1.5 ± 0.1 1. Base 2. Collector (heat sink) 3. Emitter **JEDEC** JEITA SC-62 **TOSHIBA** 2-5K1A

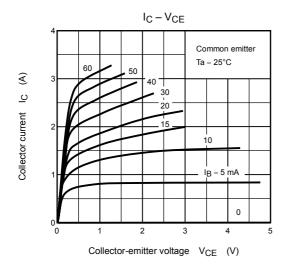
Weight: 0.05 g (typ.)

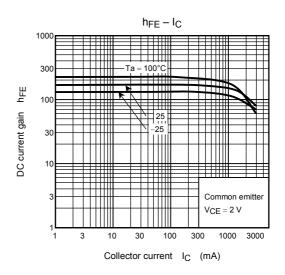
Electrical Characteristics (Ta = 25°C)

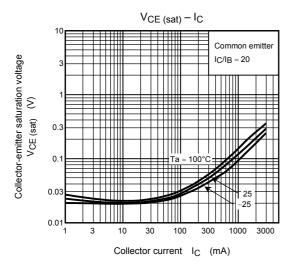
Charact	eristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off cur	rent	I _{CBO}	V _{CB} = 80 V, I _E = 0	_	_	0.1	μΑ
Emitter cut-off curre	ent	I _{EBO}	V _{EB} = 6 V, I _C = 0	-	_	0.1	μΑ
Collector-emitter br	eakdown voltage	V (BR) CEO	I _C = 10 mA, I _B = 0	50	_	_	V
DC current gain		h _{FE (1)}	V _{CE} = 2 V, I _C = 100 mA	120	_	400	
		h _{FE (2)}	V _{CE} = 2 V, I _C = 2 A	40	_	_	
Collector-emitter sa	turation voltage	V _{CE (sat)}	I _C = 1.5 A, I _B = 75 mA	-	_	0.5	V
Base-emitter saturation voltage		V _{BE (sat)}	I _C = 1.5 A, I _B = 75 mA	-	_	1.2	V
Transition frequency		f _T	V _{CE} = 2 V, I _C = 100 mA	-	100	_	MHz
Collector output capacitance		C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz		20	_	pF
Switching time	Turn-on time	t _{on}	OUTPUT 20 μ S INPUT \downarrow B1 \downarrow	_	0.1	_	
	Storage time	t _{stg}		_	0.5	_	μs
	Fall time	t _f		_	0.1	_	

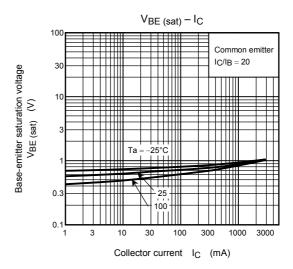
Marking



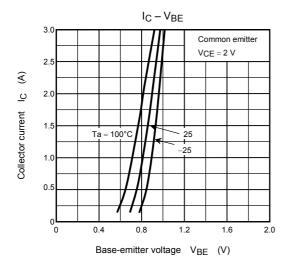


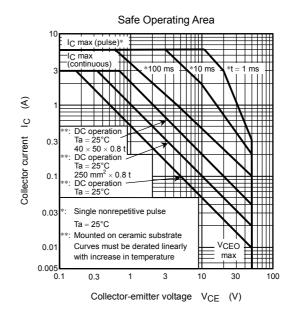


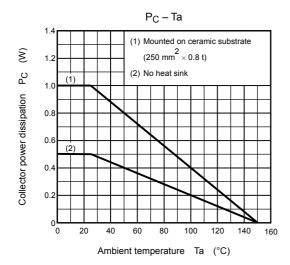




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