TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

2SA1452A

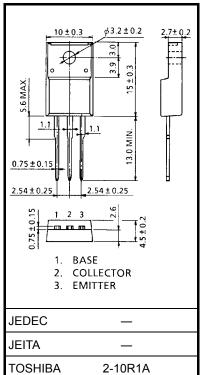
High-Speed, High-Current Switching Applications

Low collector saturation voltage: V_{CE} (sat) = -0.4 V (max) (I_C = -6 A)

- High-speed switching: $t_{stg} = 1.0 \ \mu s$ (typ.)
- Complementary to 2SC3710A

Absolute Maximum Ratings (Tc = 25°C)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V _{CBO}	-80	V	
Collector-emitter voltage	V _{CEO}	-80	V	
Emitter-base voltage	V _{EBO}	-6	V	
Collector current	Ι _C	-12	А	
Base current	Ι _Β	-2	А	
Collector power dissipation	De	30	W	
(Tc = 25°C)	P _C	30	٧V	
Junction temperature	Тj	150	°C	
Storage temperature range	T _{stg}	−55 to 150	°C	



Weight: 1.7 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

temperature, etc.) may cause this product to decrease in the

reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

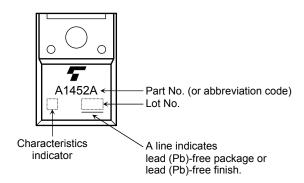
Unit: mm

Electrical Characteristics (Tc = 25°C)

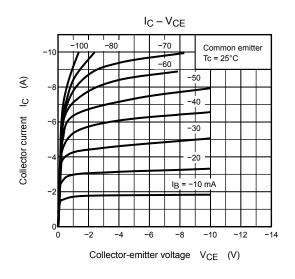
Chara	cteristics	Symbol	Test Condition	Min	Тур.	Max	Unit	
Collector cut-off c	urrent	I _{CBO}	$V_{CB} = -80 \text{ V}, I_E = 0$	_	_	-10	μA	
Emitter cut-off cur	rent	I _{EBO}	$V_{EB} = -6 V, I_C = 0$		_	-10	μA	
Collector-emitter b	oreakdown voltage	V (BR) CEO	I _C = -50 mA, I _B = 0	-80	_	_	V	
DC current gain		h _{FE (1)} (Note)	V _{CE} = -1 V, I _C = -1 A	70	_	240		
		h _{FE (2)}	V _{CE} = -1 V, I _C = -6 A	40	_	_		
Collector-emitter saturation voltage		V _{CE (sat)}	I _C = -6 A, I _B = -0.3 A	_	-0.2	-0.4	v	
Base-emitter saturation voltage		V _{BE (sat)}	I _C = -6 A, I _B = -0.3 A	_	-0.9	-1.2		
Transition frequer	ю	f _T	$V_{CE} = -5 V, I_C = -1 A$		50	_	MHz	
Collector output c	apacitance	C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz		400	_	pF	
Switching time	Turn-on time	t _{on}	$20 \ \mu s \qquad \text{Input} \qquad \begin{array}{c} IB2 \\ B1 \\ B1 \\ B1 \\ C \\ $	_	0.3	_		
	Storage time	t _{stg}		_	1.0	_	μs	
	Fall time	t _f	V _{CC} ≈ −30 V −I _{B1} = I _{B2} = 0.3 A, duty cycle ≤ 1%	_	0.5	_		

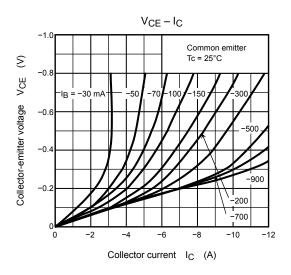
Note: hFE (1) classification O: 70 to 140, Y: 120 to 240

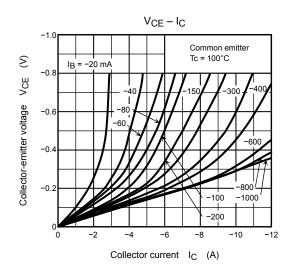
Marking

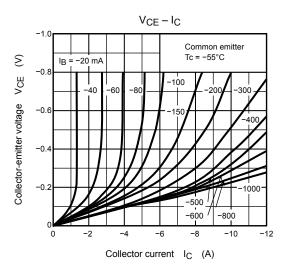


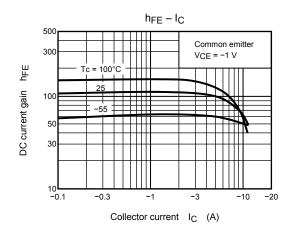
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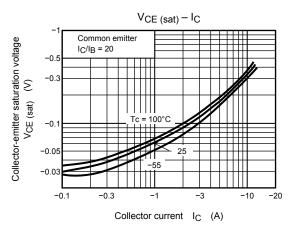




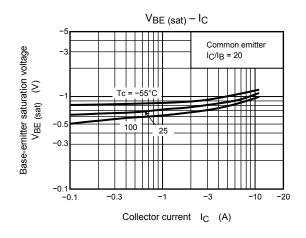


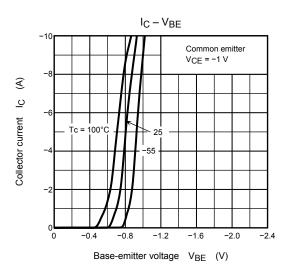


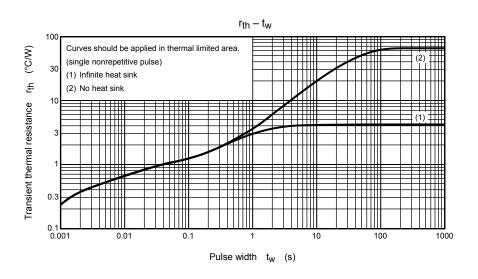


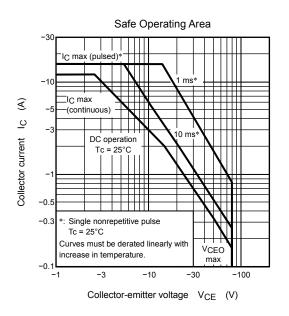


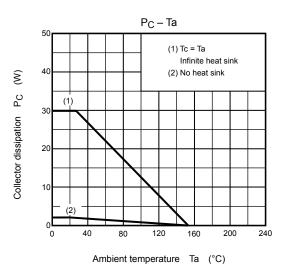
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