

TOSHIBA Transistor Silicon NPN Epitaxial Type

2SC4881

High-Current Switching Applications

- Low saturation voltage: $V_{CE(sat)} = 0.4\text{ V (max)}$
- High-speed switching: $t_{stg} = 0.8\text{ }\mu\text{s (typ.)}$

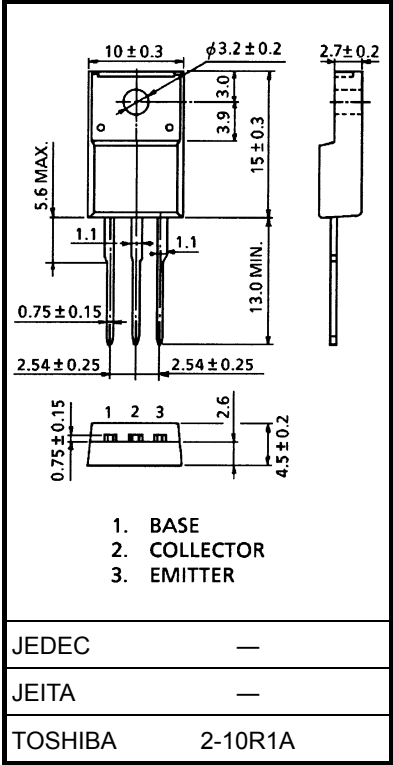
Absolute Maximum Ratings (Tc = 25°C)

Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	60	V
Collector-emitter voltage		V_{CEO}	50	V
Emitter-base voltage		V_{EBO}	5	V
Collector current	DC	I_C	5	A
	Pulse	I_{CP}	8	
Base current		I_B	1	A
Collector power dissipation	Ta = 25°C	P_C	2.0	W
	Tc = 25°C		20	
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-55 to 150	°C

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.

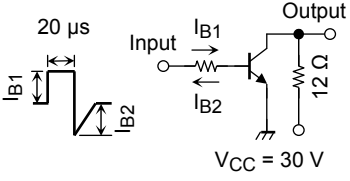
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm

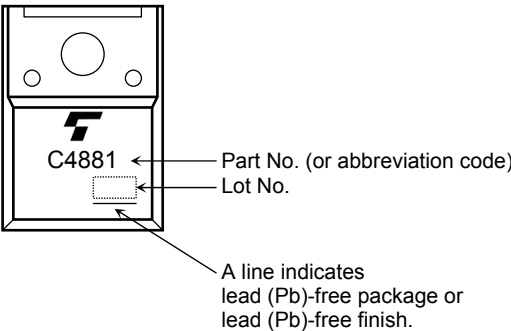


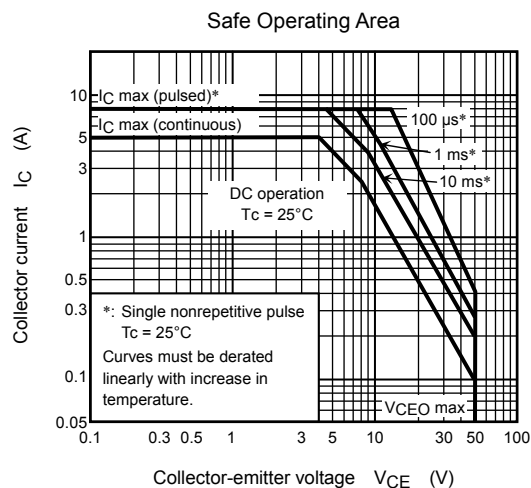
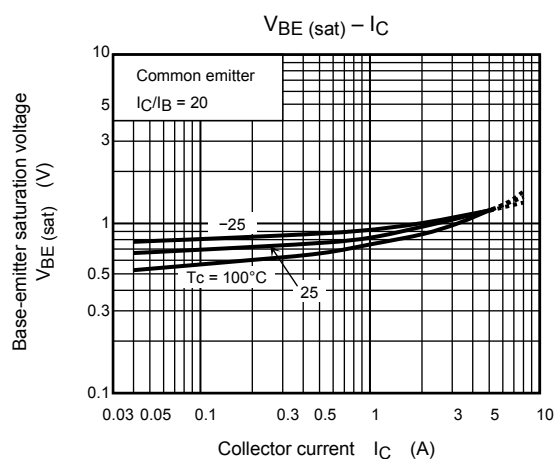
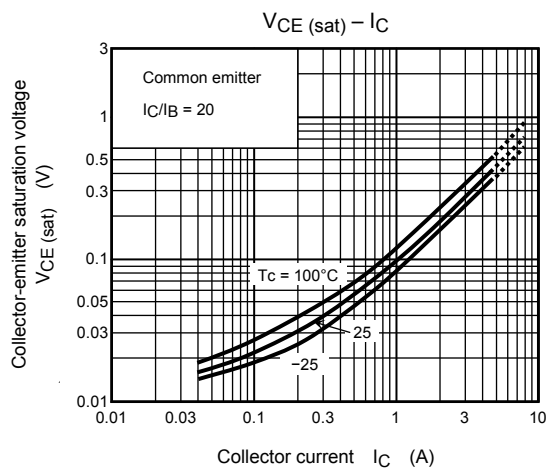
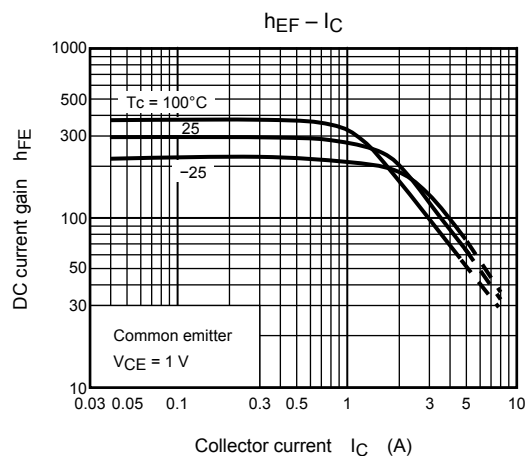
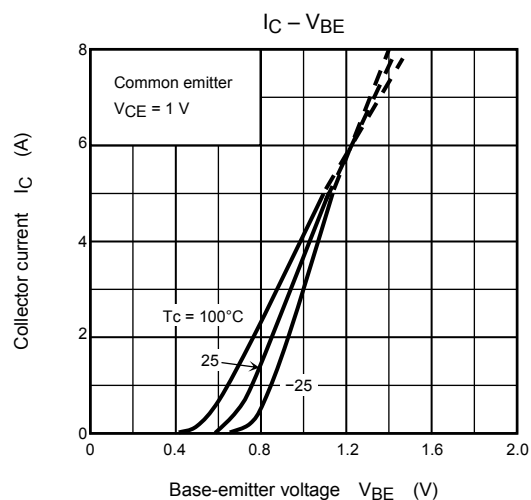
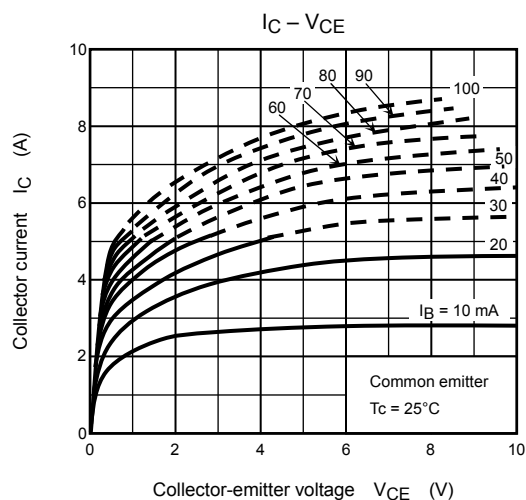
Weight: 1.7 g (typ.)

Electrical Characteristics (Tc = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		ICBO	V _{CB} = 50 V, I _E = 0	—	—	1	μA
Emitter cut-off current		IEBO	V _{EB} = 6 V, I _C = 0	—	—	1	μA
Collector-emitter breakdown voltage		V (BR) CEO	I _C = 10 mA, I _B = 0	50	—	—	V
DC current gain		hFE (1)	V _{CE} = 1 V, I _C = 1 A	100	—	320	
		hFE (2)	V _{CE} = 1 V, I _C = 2.5 A	60	—	—	
Collector-emitter saturation voltage		V _{CE} (sat)	I _C = 2.5 A, I _B = 125 mA	—	0.25	0.4	V
Base-emitter saturation voltage		V _{BE} (sat)	I _C = 2.5 A, I _B = 125 mA	—	1.0	1.3	V
Transition frequency		f _T	V _{CB} = 4 V, I _C = 1 A	—	100	—	MHz
Collector output capacitance		C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	45	—	pF
Switching time	Turn-on time	t _{on}	 I _{B1} = -I _{B2} = 125 mA, duty cycle ≤ 1%	—	0.1	—	μs
	Storage time	t _{stg}		—	0.8	—	
	Fall time	t _f		—	0.1	—	

Marking





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