

TOSHIBA Transistor Silicon NPN Epitaxial Type

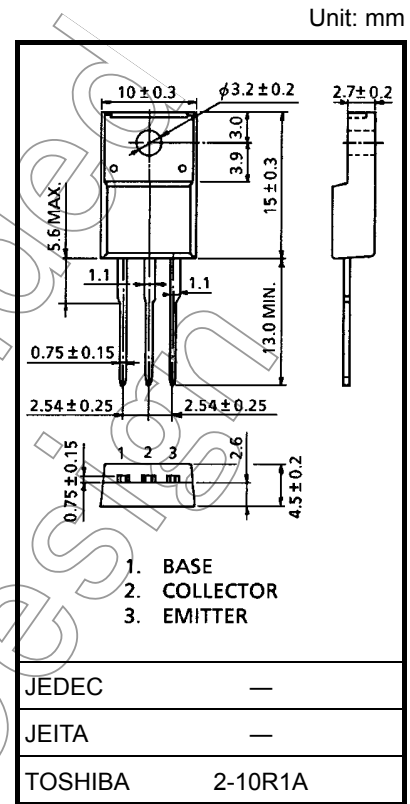
2SC4881

High-Current Switching Applications

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

Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

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	A
Base current		I_B	1	A
Collector power dissipation	$T_a = 25^\circ\text{C}$	P_C	2.0	W
	$T_c = 25^\circ\text{C}$		20	
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55 to 150	$^\circ\text{C}$



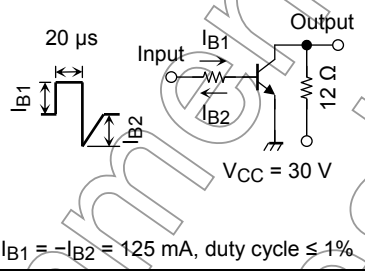
Weight: 1.7 g (typ.)

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.

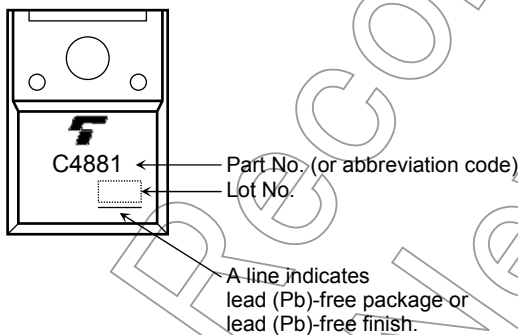
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

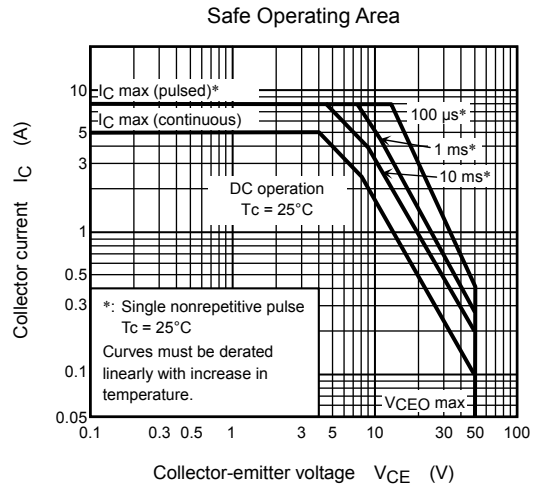
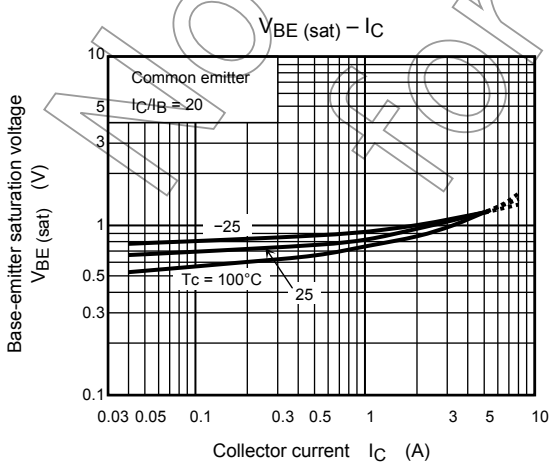
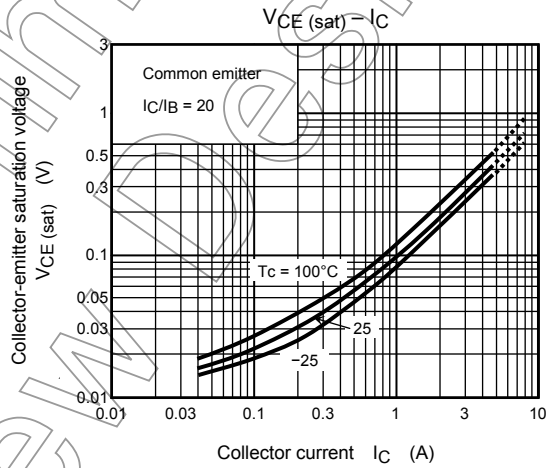
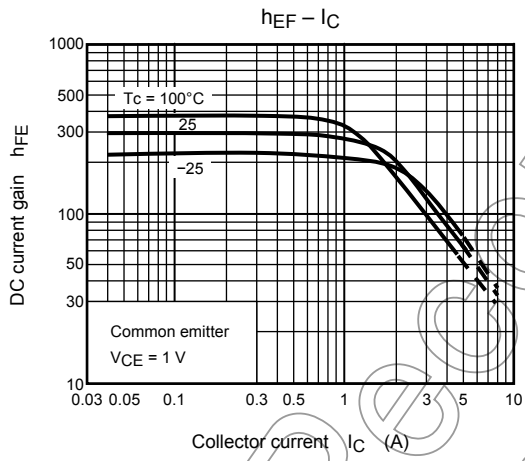
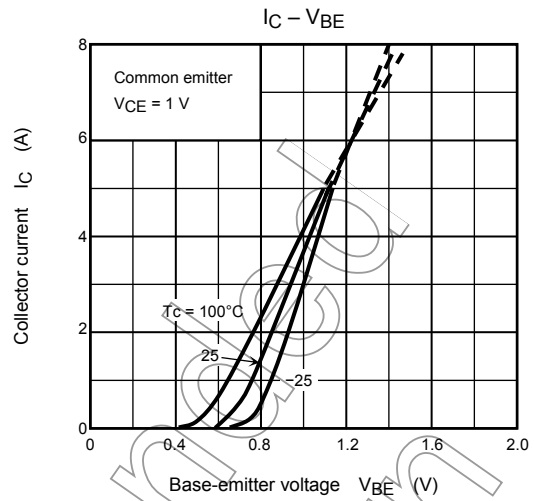
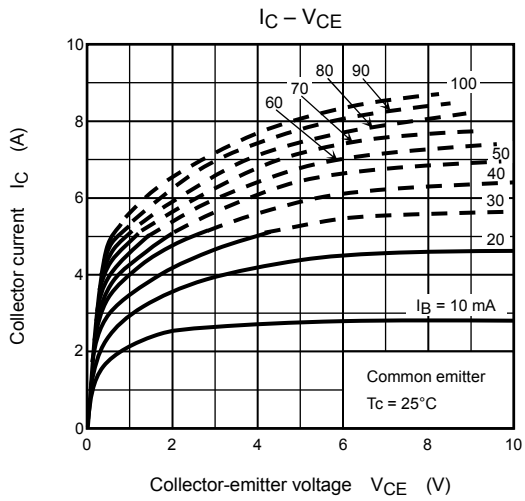
Not for New

Electrical Characteristics (Tc = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 50\text{ V}, I_E = 0$	—	—	1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 6\text{ V}, I_C = 0$	—	—	1	μA
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	50	—	—	V
DC current gain		$h_{FE(1)}$	$V_{CE} = 1\text{ V}, I_C = 1\text{ A}$	100	—	320	
		$h_{FE(2)}$	$V_{CE} = 1\text{ V}, I_C = 2.5\text{ A}$	60	—	—	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 2.5\text{ A}, I_B = 125\text{ mA}$	—	0.25	0.4	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = 2.5\text{ A}, I_B = 125\text{ mA}$	—	1.0	1.3	V
Transition frequency		f_T	$V_{CB} = 4\text{ V}, I_C = 1\text{ A}$	—	100	—	MHz
Collector output capacitance		C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	45	—	pF
Switching time	Turn-on time	t_{on}	 <p>$I_{B1} = -I_{B2} = 125\text{ mA}, \text{ duty cycle} \leq 1\%$</p>	—	0.1	—	μs
	Storage time	t_{stg}		—	0.8	—	
	Fall time	t_f		—	0.1	—	

Marking





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