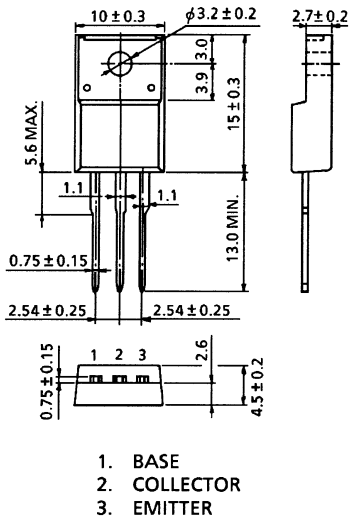
TOSHIBA Transistor Silicon NPN Epitaxial Type

2SC4881

High-Current Switching Applications

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

Unit: mm



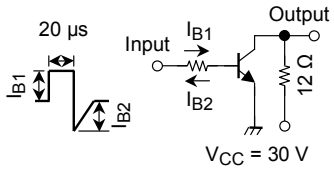
JEDEC	—
JEITA	—
TOSHIBA	2-10R1A

Weight: 1.7 g (typ.)

Maximum Ratings (Tc = 25°C)

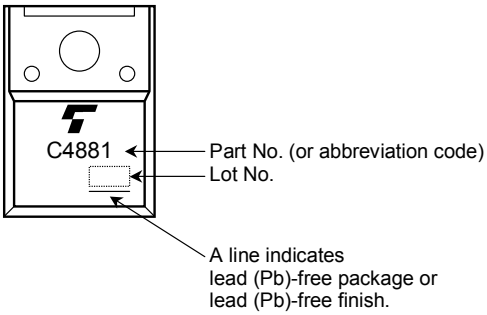
Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	60	V
Collector-emitter voltage		V_{CEO}	50	V
Emitter-base voltage		V_{EBO}	5	V
Collector current	DC	I_C	5	A
	Pulse	I_{CP}	8	
Base current		I_B	1	A
Collector power dissipation	Ta = 25°C	P_C	2.0	W
	Tc = 25°C		20	
Junction temperature	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

Electrical Characteristics (Tc = 25°C)

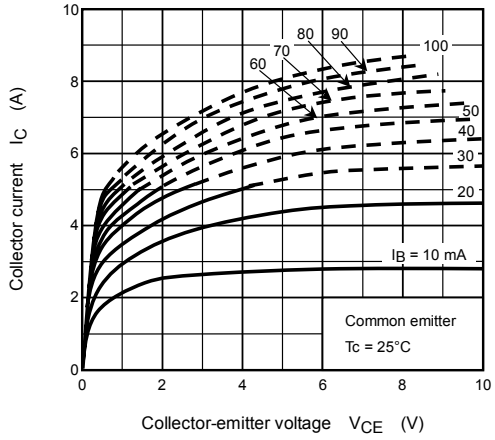
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	V_{CB} = 50 V, I_E = 0	—	—	1	μA
Emitter cut-off current		I_{EBO}	V_{EB} = 6 V, I_C = 0	—	—	1	μA
Collector-emitter breakdown voltage		$V_{(BR)\ CEO}$	I_C = 10 mA, I_B = 0	50	—	—	V
DC current gain		$h_{FE\ (1)}$	V_{CE} = 1 V, I_C = 1 A	100	—	320	
		$h_{FE\ (2)}$	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}		—	0.1	—	μs
	Storage time	t_{stg}		—	0.8	—	
	Fall time	t_f		—	0.1	—	

I_{B1} = −I_{B2} = 125 mA, duty cycle ≤ 1%

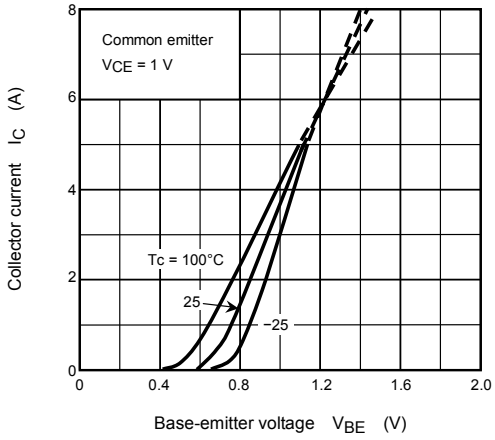
Marking


C4881
Part No. (or abbreviation code)
Lot No.
A line indicates
lead (Pb)-free package or
lead (Pb)-free finish.

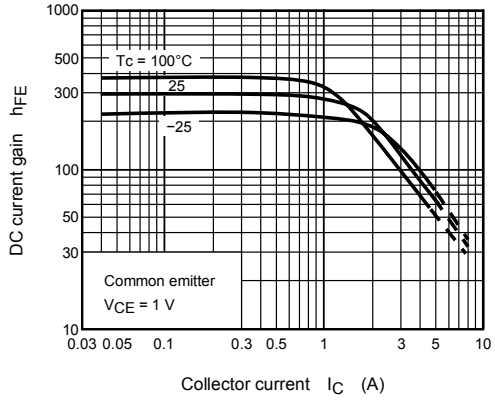
$I_C - V_{CE}$



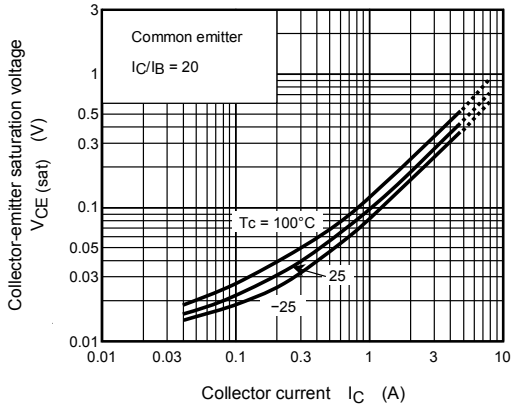
$I_C - V_{BE}$



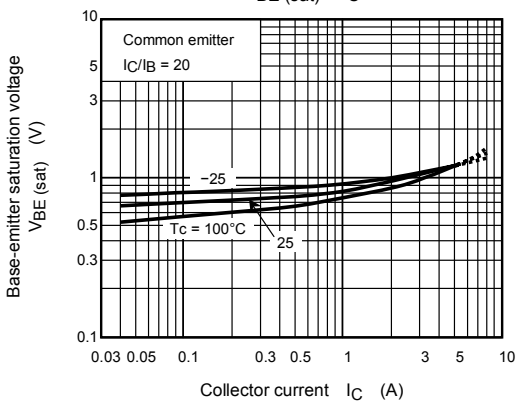
$h_{EF} - I_C$



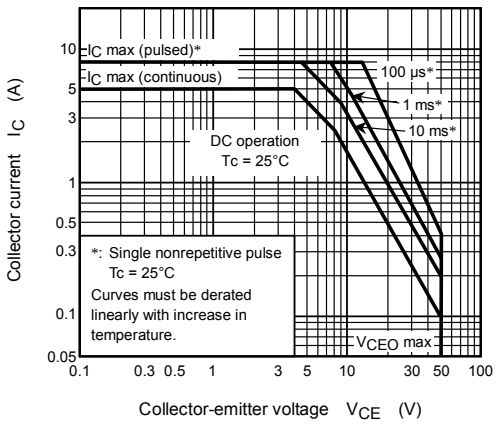
$V_{CE\ (sat)} - I_C$



$V_{BE\ (sat)} - I_C$



Safe Operating Area



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