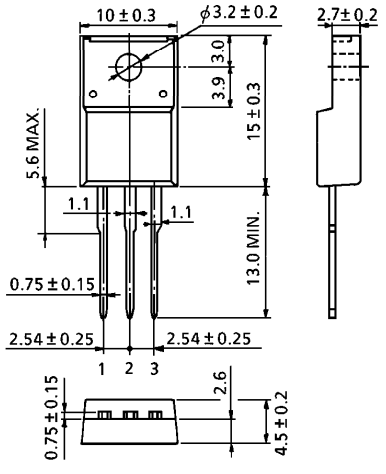
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4881

HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm



JEDEC	—
JEITA	—
TOSHIBA	2-10R1A

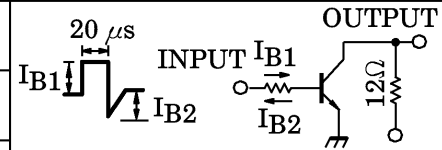
Weight : 1.7 g (Typ.)

- Low Saturation Voltage
  : $V_{CE\ (sat)}$ = 0.4 V (MAX.)
- High Speed Switching Time : t_{stg} = 0.8 μs (Typ.)

MAXIMUM RATINGS (Tc = 25°C)

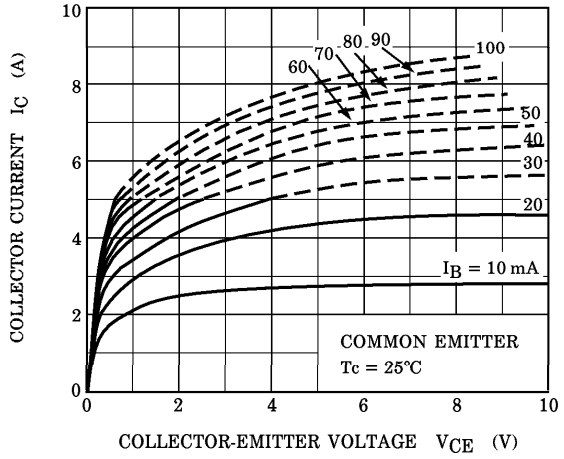
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Collector-Emitter Voltage		V_{CEO}	50	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	5	A
	Pulse	I_{CP}	8	
Base Current		I_B	1	A
Collector Power Dissipation	Ta = 25°C	P_C	2.0	W
	Tc = 25°C		20	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

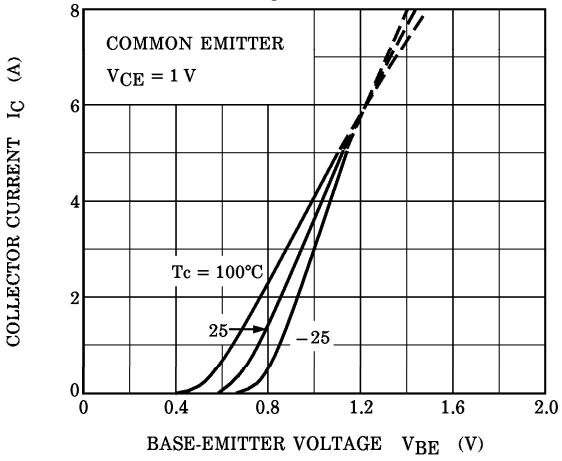
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB} = 50V, I_E = 0	—	—	1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB} = 6V, I_C = 0	—	—	1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)\ CEO}$	I_C = 10mA, I_B = 0	50	—	—	V
DC Current Gain		h_{FE} (1)	V_{CE} = 1V, I_C = 1A	100	—	320	
		h_{FE} (2)	V_{CE} = 1V, I_C = 2.5A	60	—	—	
Collector-Emitter Saturation Voltage		$V_{CE\ (sat)}$	I_C = 2.5A, I_B = 125mA	—	0.25	0.4	V
Base-Emitter Saturation Voltage		$V_{BE\ (sat)}$	I_C = 2.5A, I_B = 125mA	—	1.0	1.3	V
Transition Frequency		f_T	V_{CE} = 4V, I_C = 1A	—	100	—	MHz
Collector Output Capacitance		C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	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, V_{CC} = 30 V
DUTY CYCLE ≦ 1%

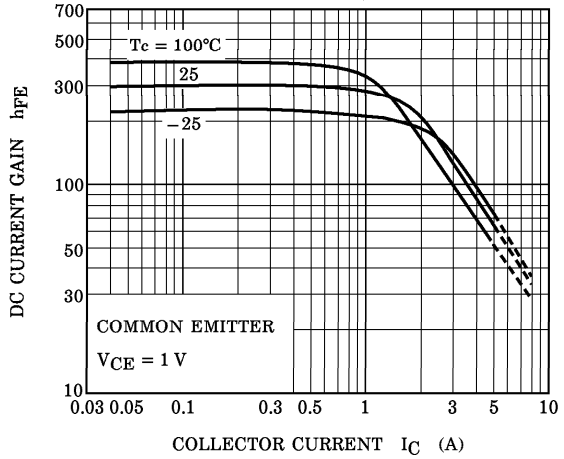
$I_C - V_{CE}$



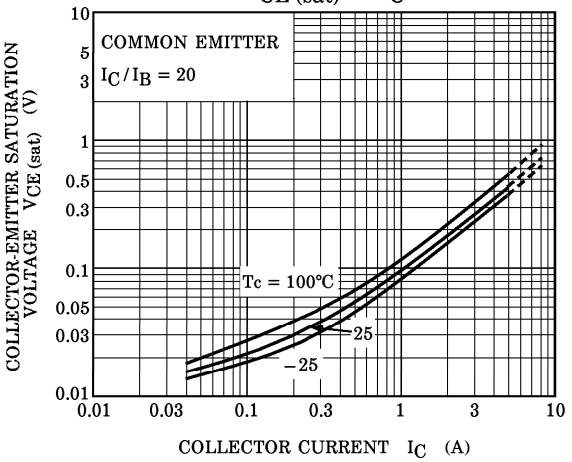
$I_C - V_{BE}$



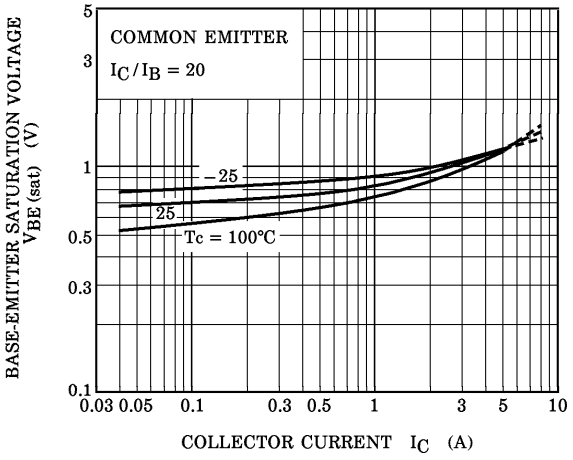
$h_{FE} - I_C$



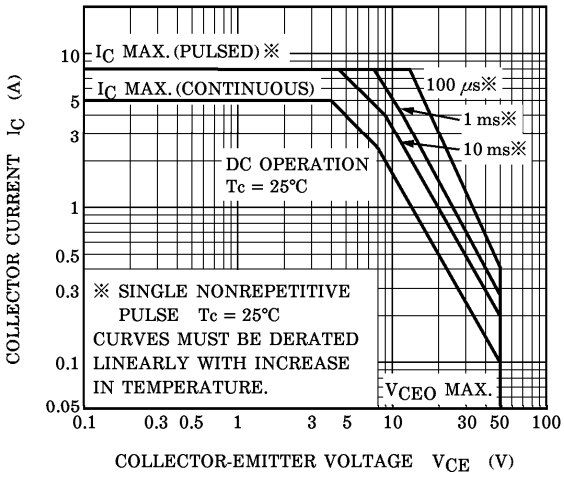
$V_{CE\,(sat)} - I_C$



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



SAFE OPERATING AREA



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