

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4881

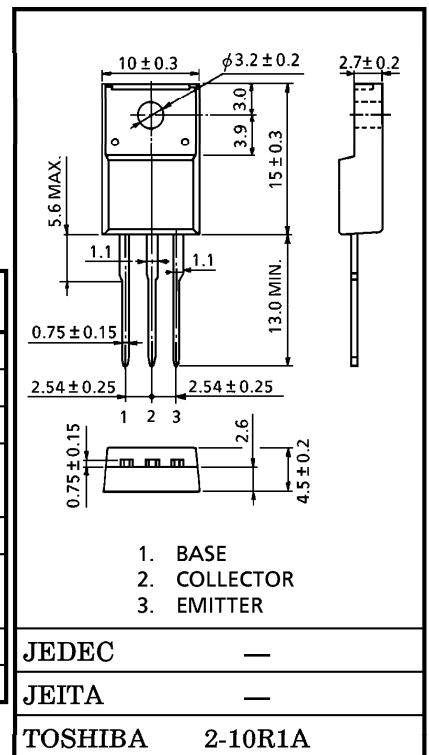
HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

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

MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

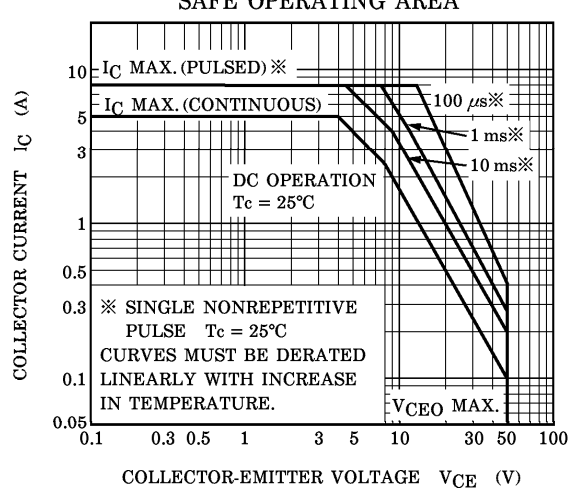
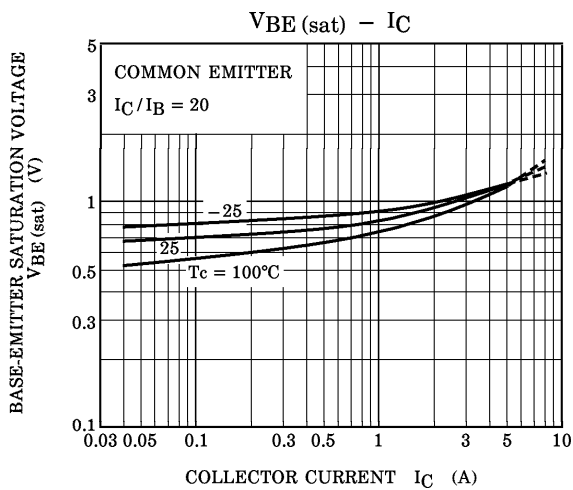
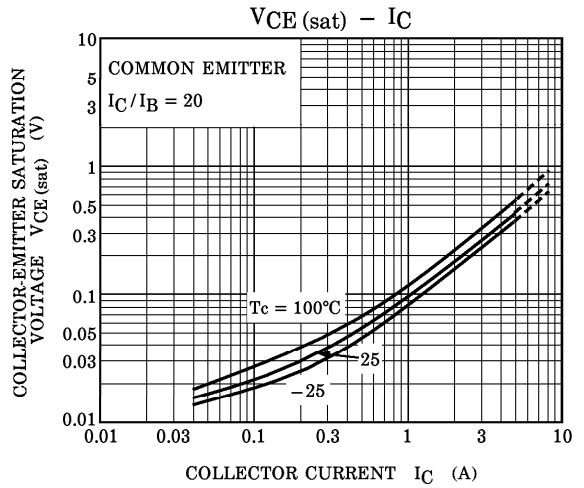
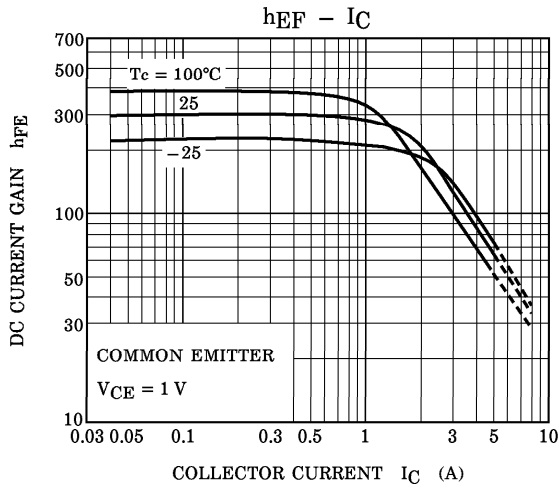
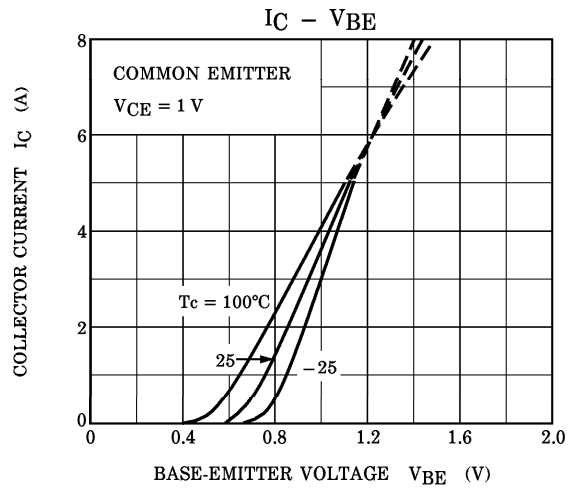
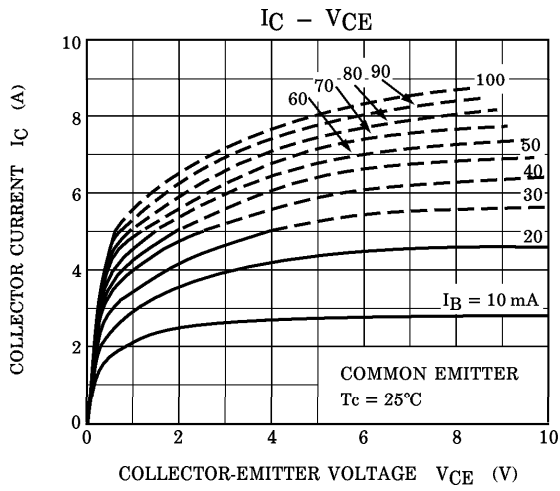
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CB0}	60	V
Collector-Emitter Voltage		V_{CEO}	50	V
Emitter-Base Voltage		V_{EB0}	5	V
Collector Current	DC	I_C	5	A
	Pulse	I_{CP}	8	
Base Current		I_B	1	A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	P_C	2.0	W
	$T_c = 25^\circ\text{C}$		20	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

Weight : 1.7 g (Typ.)

CHARACTERISTIC		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	$V_{CE} = 4\text{V}, I_C = 1\text{A}$	—	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}		—	0.1	—	μs
	Storage Time	t_{stg}		—	0.8	—	
	Fall Time	t_f		—	0.1	—	



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