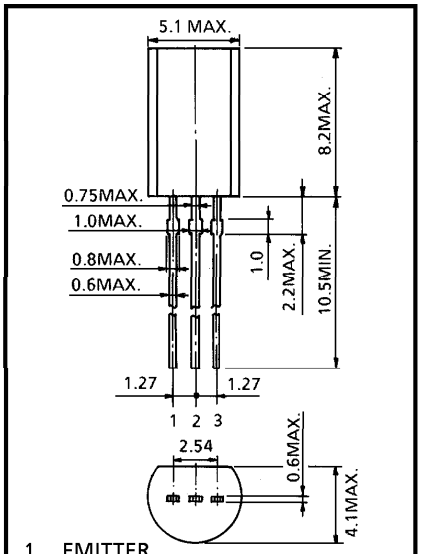
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4604

POWER AMPLIFIER APPLICATION.
POWER SWITCHING APPLICATIONS.

- Low Collector-Emitter Saturation Voltage
  : $V_{CE(sat)}$ = 0.5V (max.) (I_C = 1.5A)
- High Speed Switching : t_{stg} = 0.5 μs (Typ.)
- Complementary to 2SA1761

Unit in mm



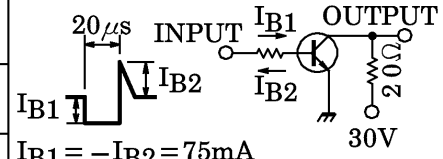
JEDEC	TO-92MOD
JEITA	—
TOSHIBA	2-5J1A

Weight : 0.36g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

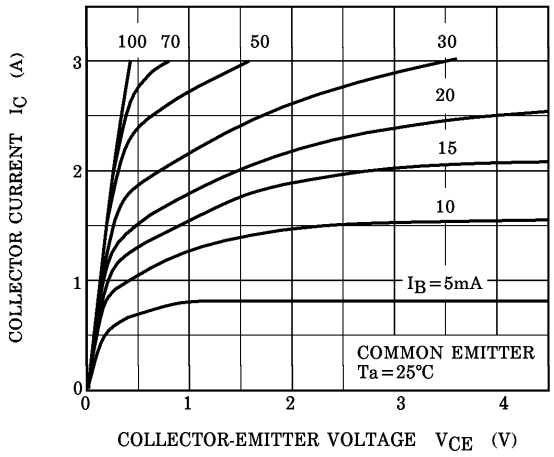
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	3	A
Base Current	I_B	0.6	A
Collector Power Dissipation	P_C	900	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

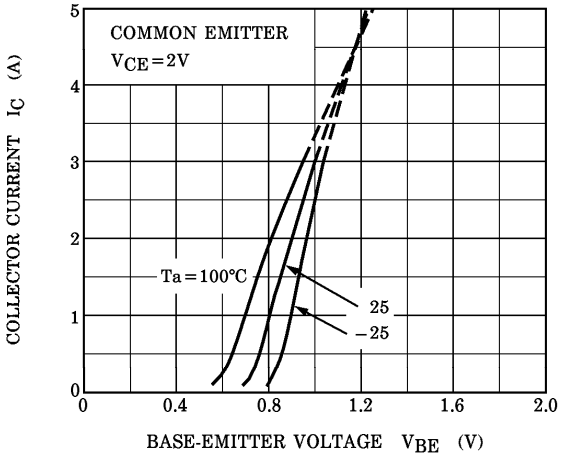
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB} = 80V, I_E = 0	—	—	0.1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB} = 6V, I_C = 0	—	—	0.1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C = 10mA, I_E = 0	50	—	—	V
DC Current Gain		$h_{FE(1)}$	V_{CE} = 2V, I_C = 100mA	120	—	400	
		$h_{FE(2)}$	V_{CE} = 2V, I_C = 2A	40	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C = 1.5A, I_B = 75mA	—	—	0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C = 1.5A, I_B = 75mA	—	—	1.2	V
Transition Frequency		f_T	V_{CE} = 2V, I_C = 100mA	—	100	—	MHz
Collector Output Capacitance		C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	20	—	pF
Switching Time	Turn-on Time	t_{on}		—	0.1	—	μs
	Storage Time	t_{stg}		—	0.5	—	
	Fall Time	t_f		—	0.1	—	

$I_{B1} = -I_{B2}$ = 75mA
DUTY CYCLE ≦ 1%

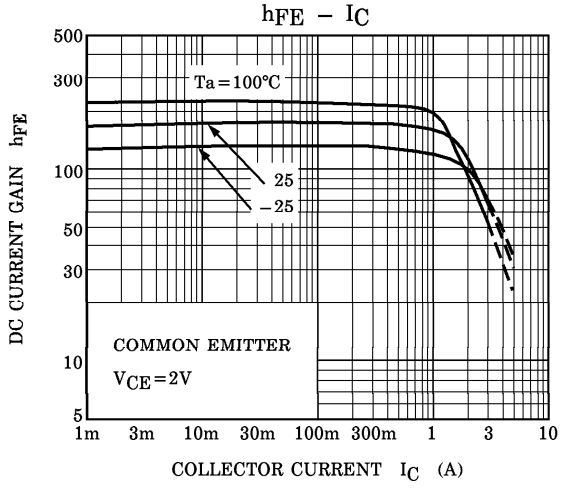
$I_C - V_{CE}$



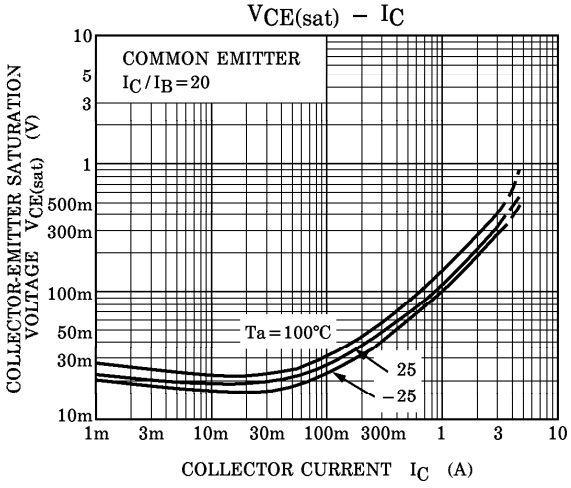
$I_C - V_{BE}$



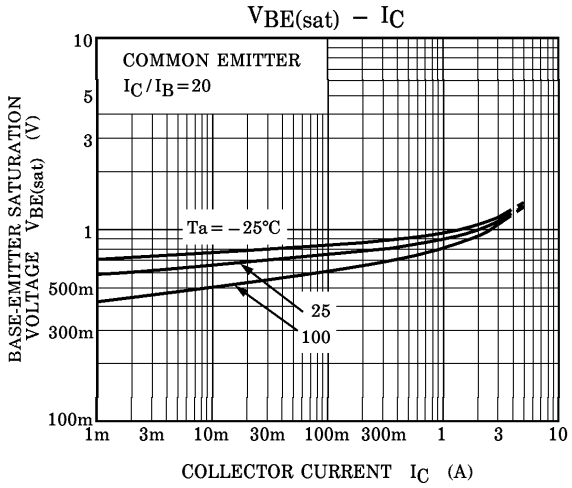
$h_{FE} - I_C$



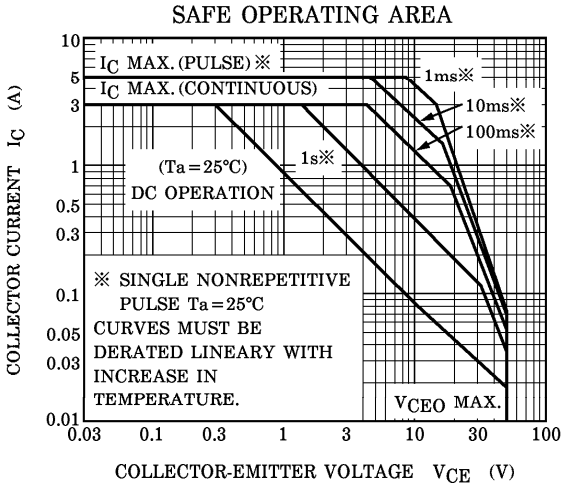
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



SAFE OPERATING AREA



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