

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4604

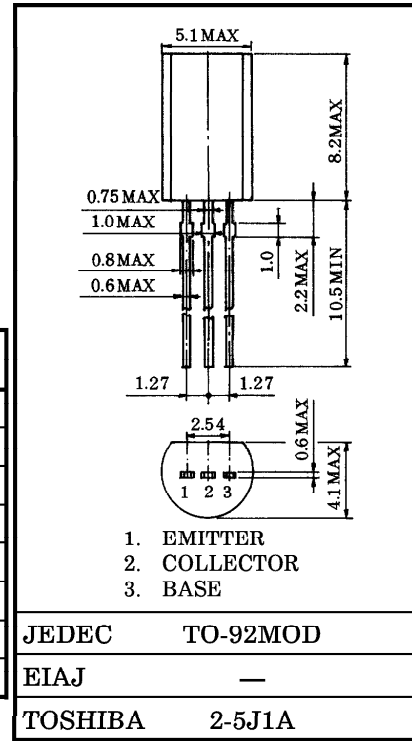
POWER AMPLIFIER APPLICATION.
POWER SWITCHING APPLICATIONS.

Unit in mm

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

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emmitter Voltage	V_{CEO}	50	V
Emmitter-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	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



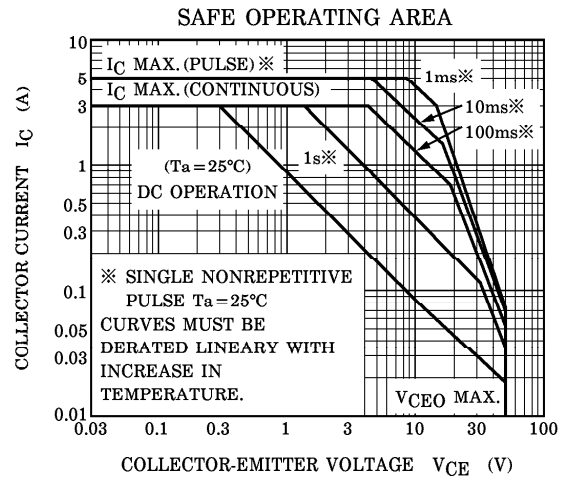
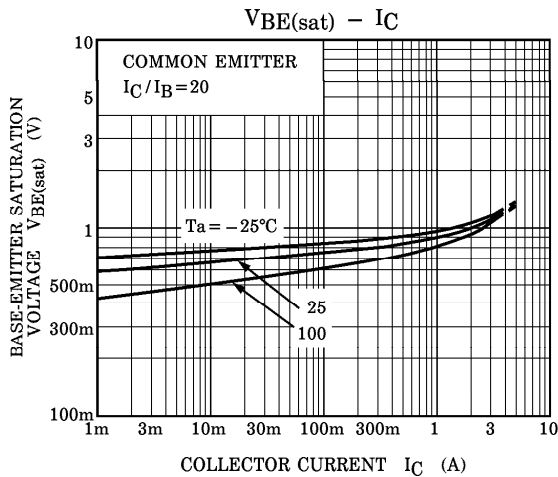
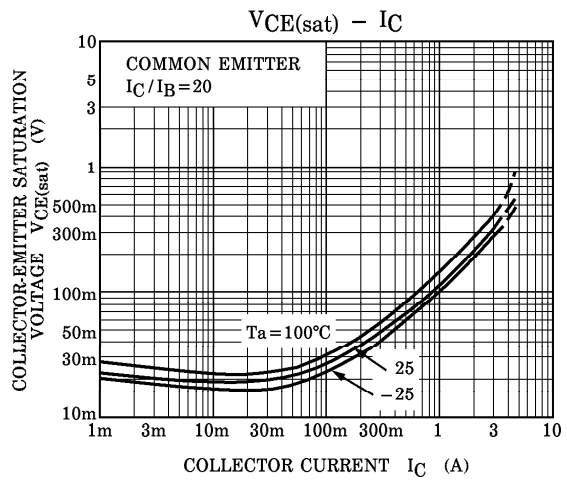
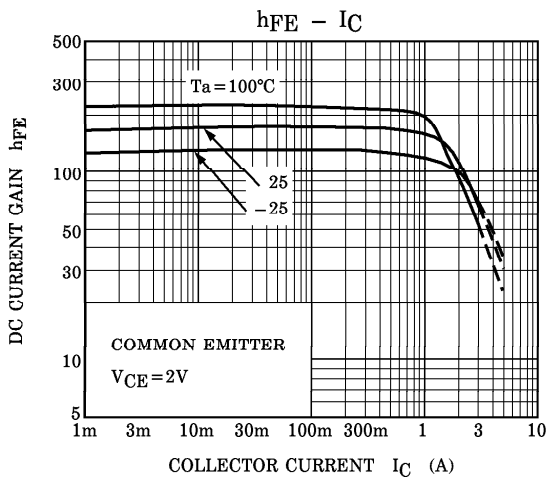
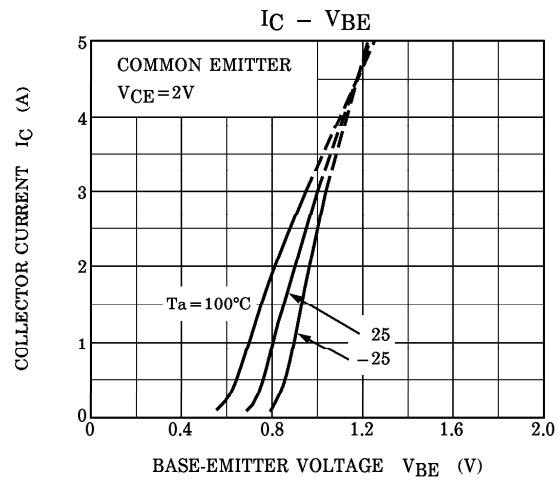
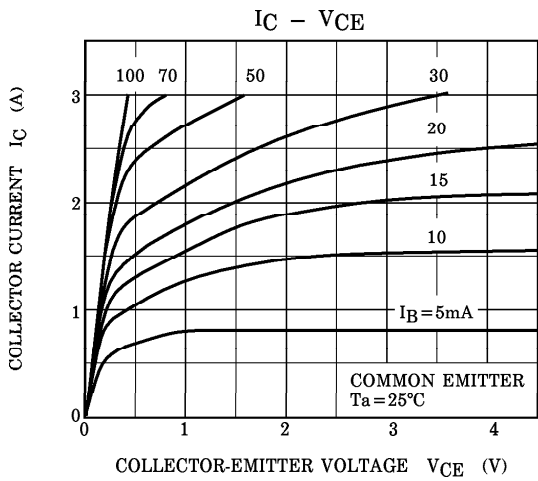
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Weight : 0.36g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT		
Collector Cut-off Current	I_{CBO}	$V_{CB} = 80V, I_E = 0$	—	—	0.1	μA		
Emmitter Cut-off Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$	—	—	0.1	μA		
Collector-Emmitter 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-Emmitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1.5A, I_B = 75mA$	—	—	0.5	V		
Base-Emmitter 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	—	

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