

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC4408

POWER AMPLIFIER APPLICATIONS

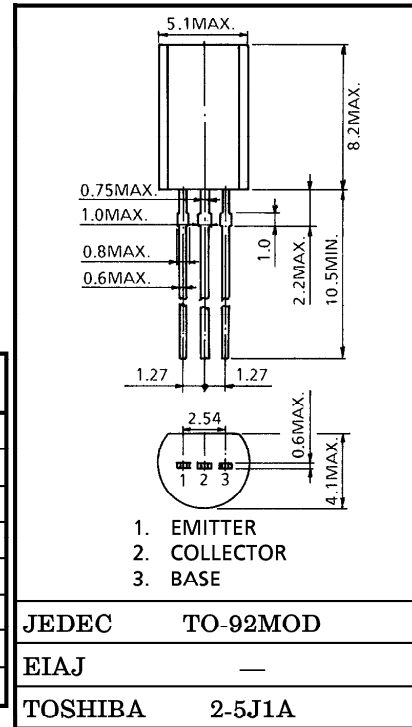
POWER SWITCHING APPLICATIONS

- Low Collector Saturation Voltage : $V_{CE(sat)} = 0.5V$ (Max.)
- High Collector Power Dissipation : $P_C = 900mW$ ($T_a = 25^\circ C$)
- High Speed Switching Time : $t_{stg} = 500ns$ (Typ.)
- Complementary to 2SA1680

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

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	2	A
Base Current	I_B	0.2	A
Collector Power Dissipation	P_C	900	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

Unit in mm



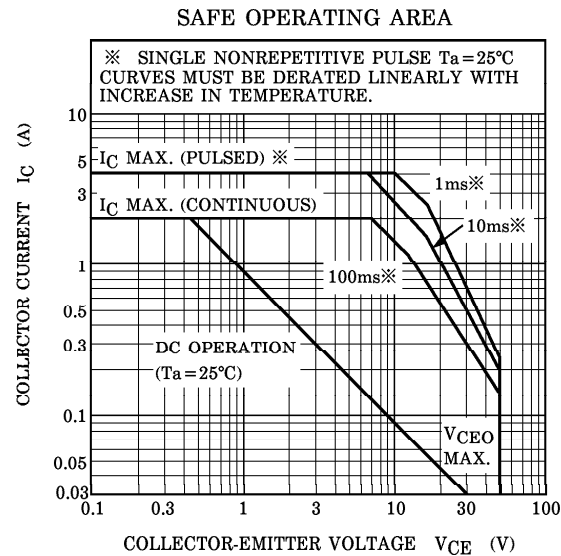
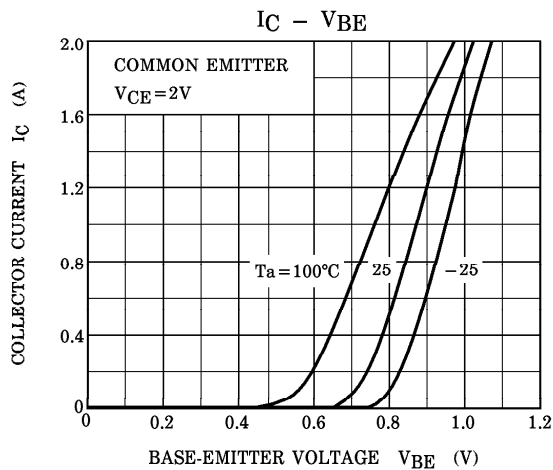
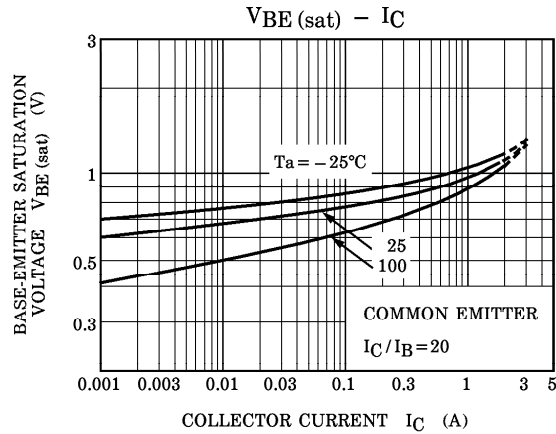
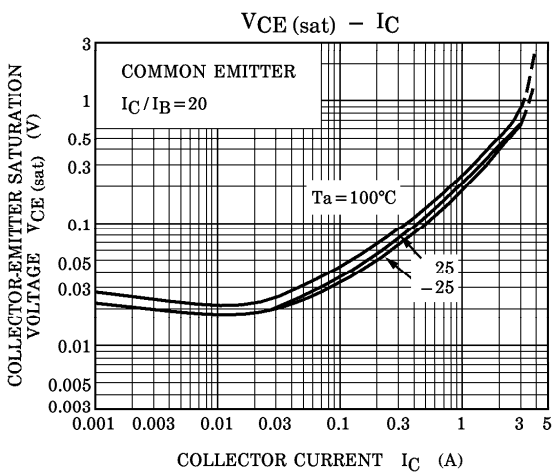
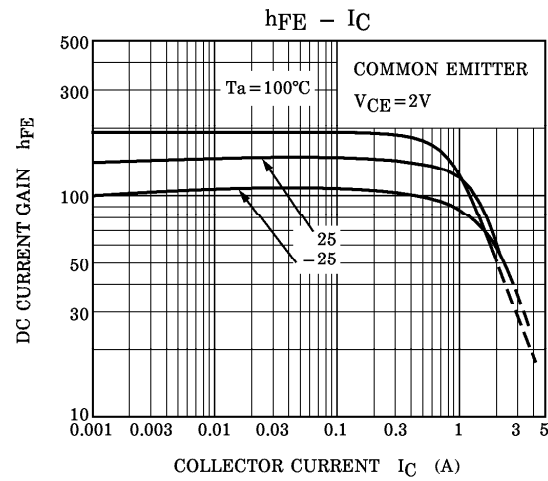
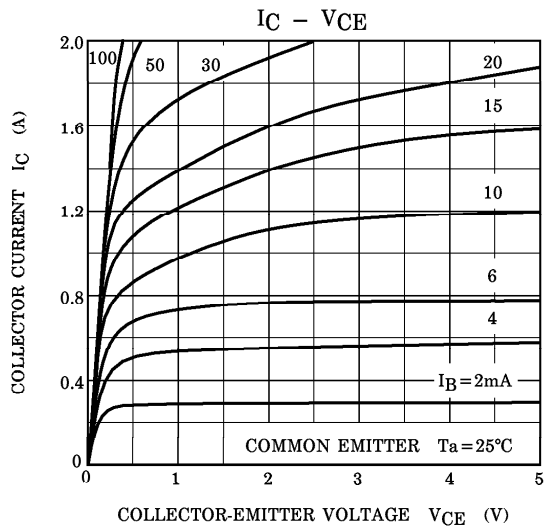
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Weight : 0.36g (Typ.)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB} = 80V, I_E = 0$	—	—	1.0	μA	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$	—	—	1.0	μA	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	50	—	—	V	
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 2V, I_C = 100mA$	120	—	400		
	$h_{FE(2)}$	$V_{CE} = 2V, I_C = 1.5A$	40	—	—		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 0.05A$	—	—	0.5	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1A, I_B = 0.05A$	—	—	1.2	V	
Transition Frequency	f_T	$V_{CE} = 2V, I_C = 100mA$	—	100	—	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	14	—	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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