

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS) (DARLINGTON)

2SC982TM

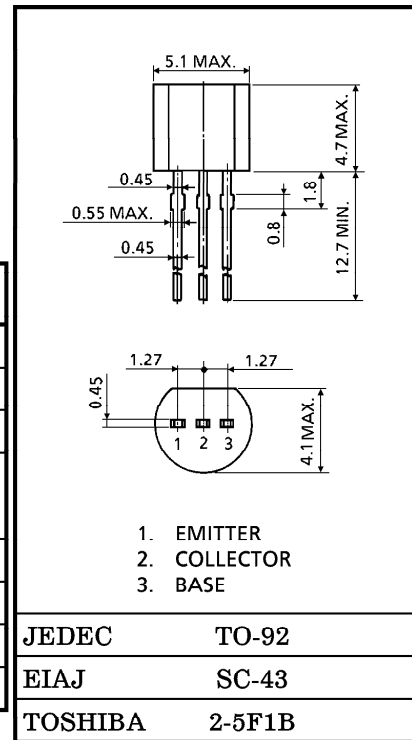
PRINTER DRIVE, CORE DRIVE AND LED DRIVE APPLICATIONS
 LOW FREQUENCY AMPLIFIER APPLICATIONS

Unit in mm

- High DC Current Gain : $h_{FE(1)} = 5000$ (Min.) ($I_C = 10\text{mA}$)
 : $h_{FE(2)} = 10000$ (Min.) ($I_C = 100\text{mA}$)

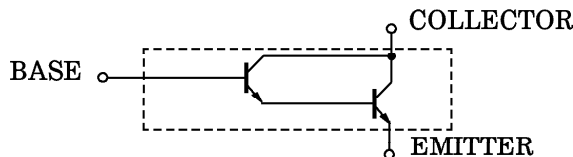
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	40	V
Collector-Emitter Voltage		V_{CEO}	40	V
Emitter-Base Voltage		V_{EBO}	10	V
Collector Current	DC	I_C	300	mA
	Pulsed (Note)	I_{CP}	500	
Base Current		I_B	10	mA
Collector Power Dissipation		P_C	400	mW
Junction Temperature		T_j	125	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~125	$^\circ\text{C}$



Note : Pulse Width $\leq 10\text{ms}$, Duty Cycle $\leq 10\%$

EQUIVALENT CIRCUIT

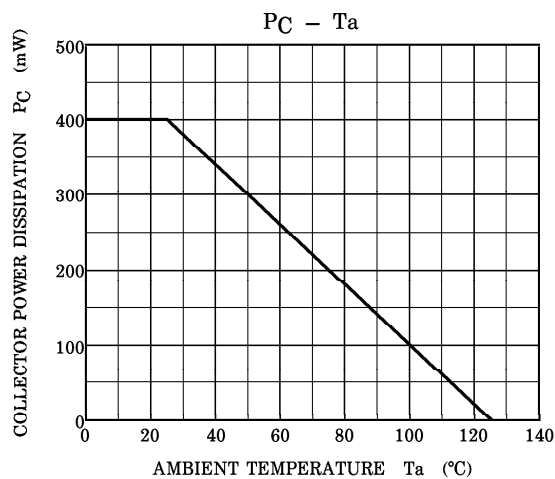
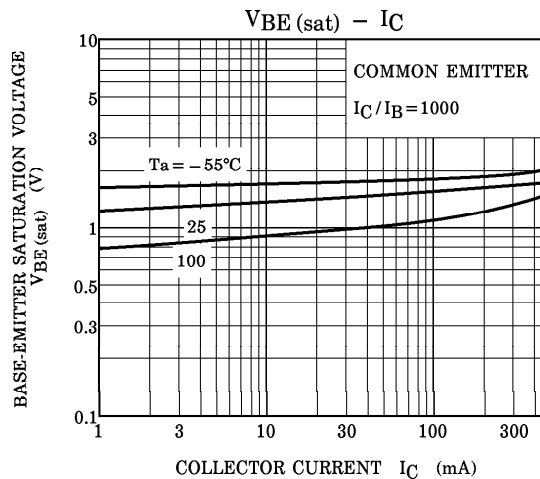
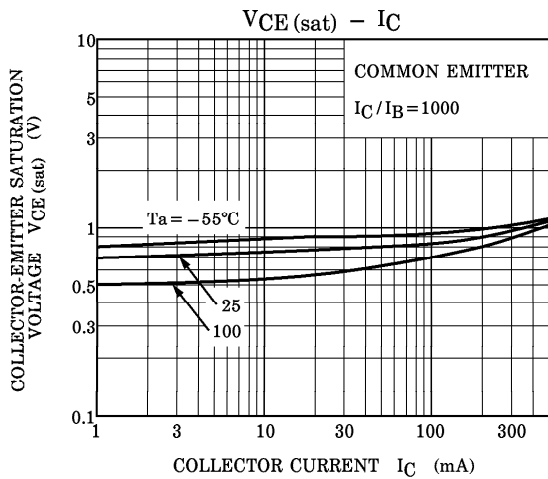
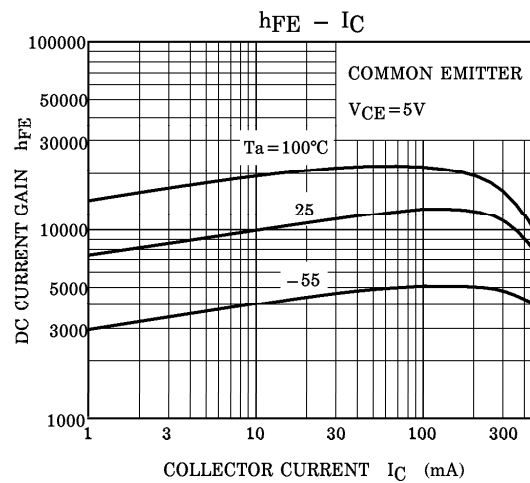
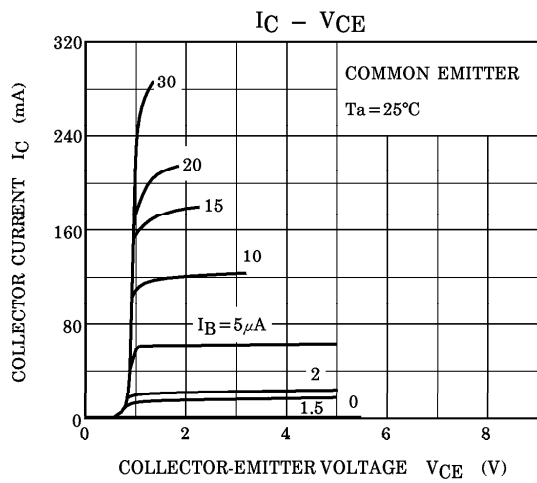


ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 8\text{V}, I_C = 0$	—	—	0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	5000	—	—	
	$h_{FE(2)}$	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	10000	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 300\text{mA}, I_B = 0.3\text{mA}$	—	0.9	1.3	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	—	1.25	1.6	V

961001EAA2

● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.



961001EAA2'

● The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
 ● The information contained herein is subject to change without notice.