TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

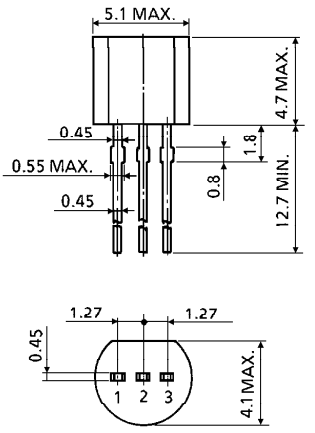
2SC2551

HIGHT VOLTAGE CONTROL APPLICATIONS
PLASMA DISPLAY, NIXIE TUBE DRIVER APPLICATIONS
CATHODE RAY TUBE BRIGHTNESS CONTROL APPLICATIONS

INDUSTRIAL APPLICATIONS

Unit in mm

- High Voltage : $V_{CBO}=300V$, $V_{CEO}=300V$
- Low Saturation Voltage : $V_{CE\ (sat)}=0.5V$ (Max.)
- Small Collector Output Capacitance : $C_{ob}=3pF$ (Typ.)
- Complementary to 2SA1091.



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92
EIAJ	SC-43
TOSHIBA	2-5F1B

Weight : 0.21g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	100	mA
Base Current	I_B	20	mA
Collector Power Dissipation	P_C	400	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}	$V_{CB}=300V$, $I_E=0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=6V$, $I_C=0$	—		0.1	μA
Collector-Base Breakdown Voltage	$V_{(BR)\ CBO}$	$I_C=0.1mA$, $I_E=0$	300	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)\ CEO}$	$I_C=1mA$, $I_B=0$	300	—	—	V
DC Current Gain	$h_{FE\ (1)}$ (Note)	$V_{CE}=10V$, $I_C=20mA$	30	—	150	
	$h_{FE\ (2)}$	$V_{CE}=10V$, $I_C=1mA$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	$I_C=20mA$, $I_B=2mA$	—	—	0.5	V
Base-Emitter Saturation Voltage	$V_{BE\ (sat)}$	$I_C=20mA$, $I_B=2mA$	50	—	1.2	V
Transition Frequency	f_T	$V_{CE}=10V$, $I_C=20mA$	—	80	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=20V$, $I_E=0$, f=1MHz	—	3	4	pF

Note : $h_{FE(1)}$ Classification R : 30~90, O : 50~150

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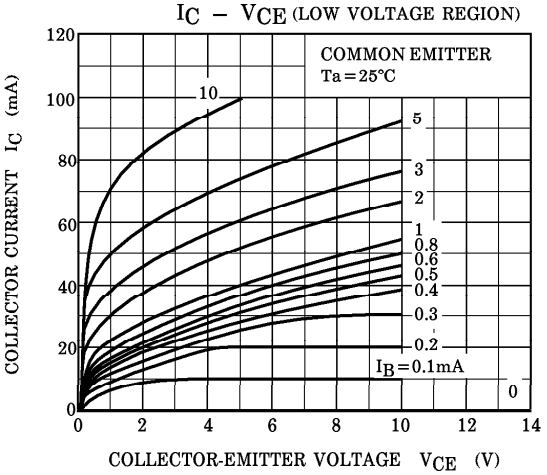
I_C – V_{CE} (LOW VOLTAGE REGION)



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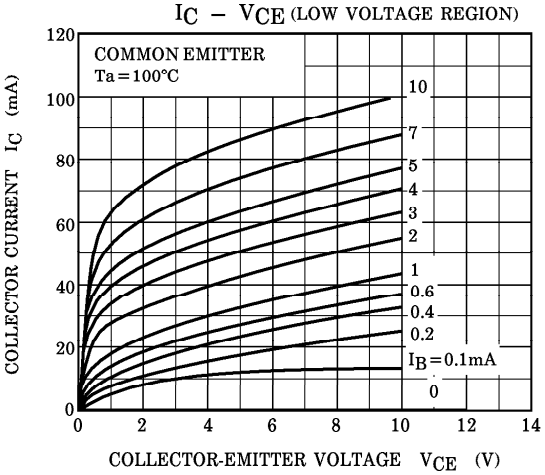

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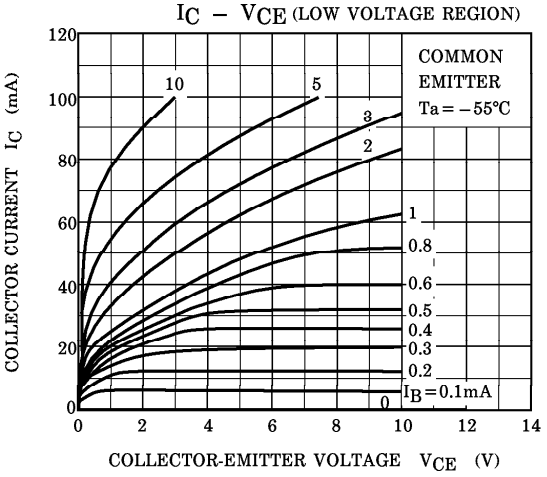

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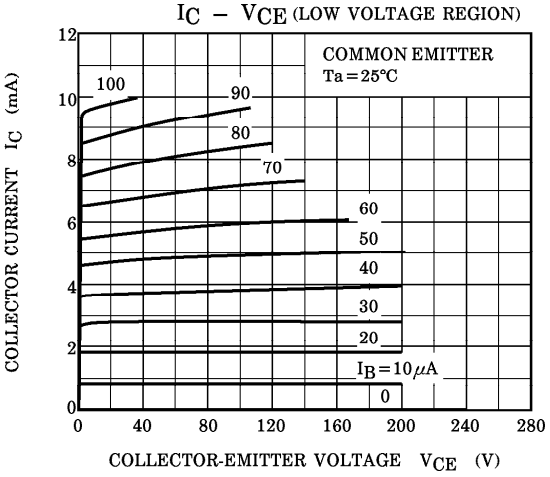

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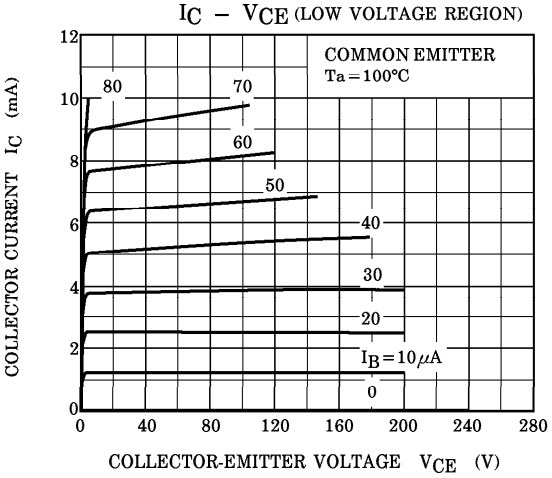

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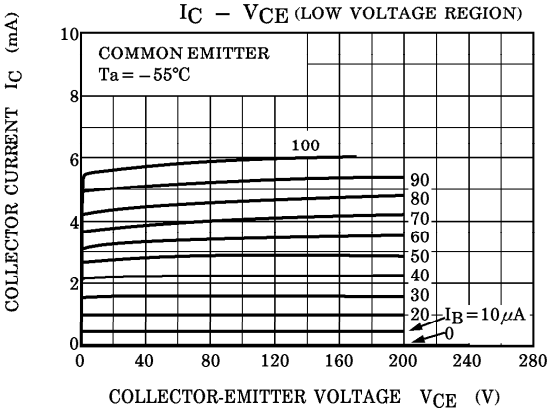

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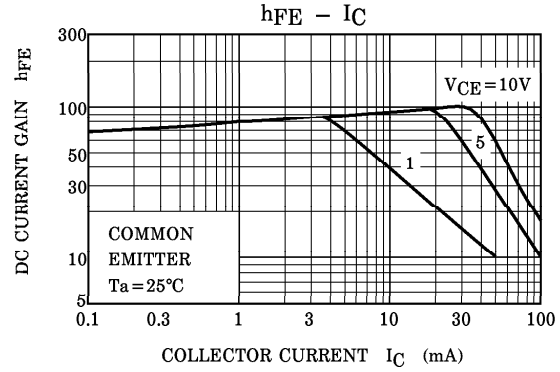
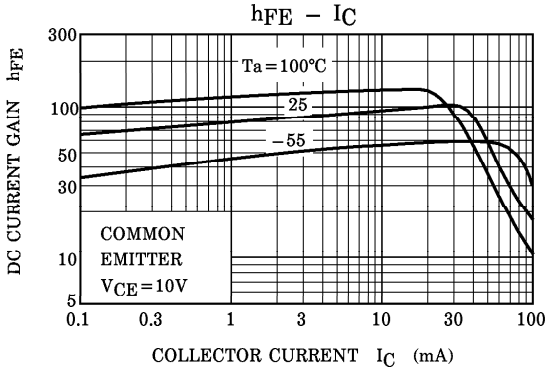
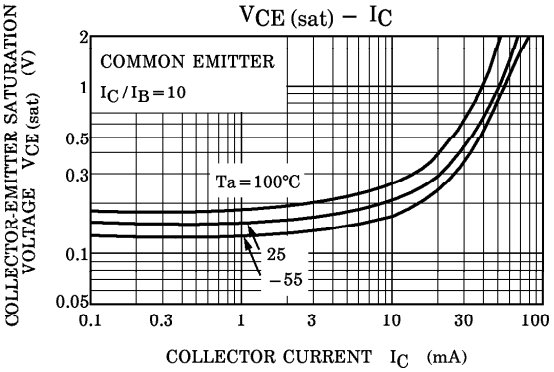
h_{FE} – I_C



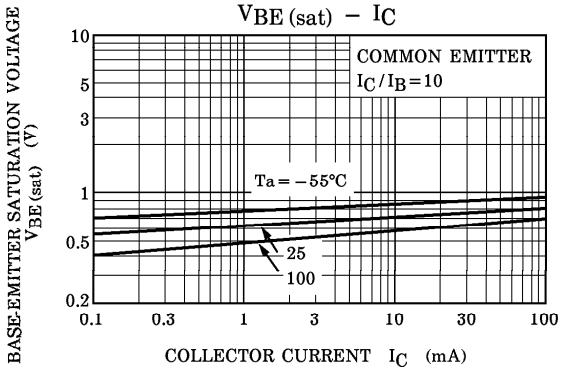
h_{FE} – I_C



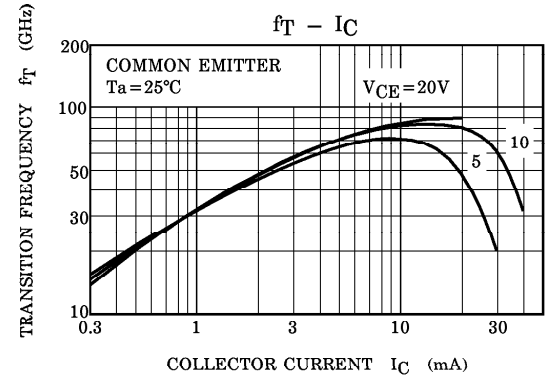
$V_{CE\,(sat)}$ – I_C



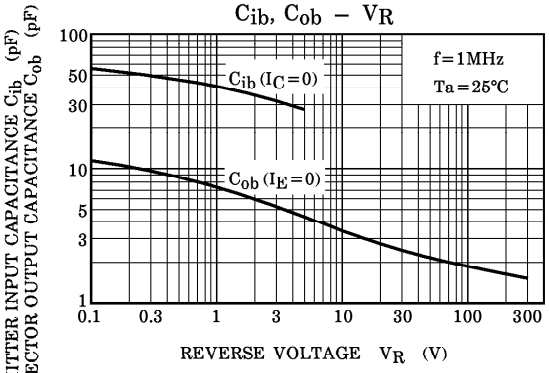
$V_{BE\,(sat)}$ – I_C



f_T – I_C



C_{ib}, C_{ob} – V_R



P_C – Ta