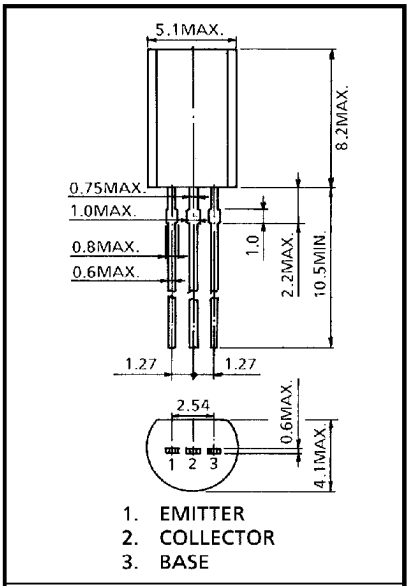
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2705

AUDIO FREQUENCY AMPLIFIER APPLICATIONS.

- Complementary to 2SA1145.
- Small Collector Output Capacitance : C_{ob} = 1.8pF (Typ.)
- High Transition Frequency : f_T = 200MHz (Typ.)

Unit in mm



JEDEC	TO-92MOD
EIAJ	—
TOSHIBA	2-5J1A

Weight : 0.36g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	150	V
Collector-Emitter Voltage	V_{CEO}	150	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Base Current	I_B	5	mA
Collector Power Dissipation	P_C	800	mA
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} = 150V, I_E = 0	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	0.1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	150	—	—	V
DC Current Gain	h_{FE} (Note)	V_{CE} = 5V, I_C = 10mA	80	—	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA	—	—	1.0	V
Base-Emitter Voltage	V_{BE}	V_{CE} = 5V, I_C = 10mA	—	—	0.8	V
Transition Frequency	f_T	V_{CE} = 5V, I_C = 10mA	—	200	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	1.8	—	pF

Note : h_{FE} Classification O : 80 ~ 160, Y : 120 ~ 240

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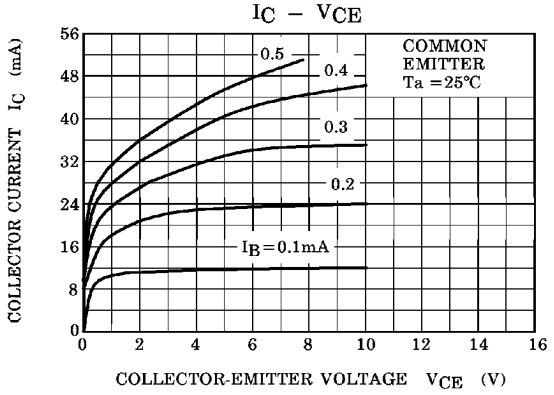
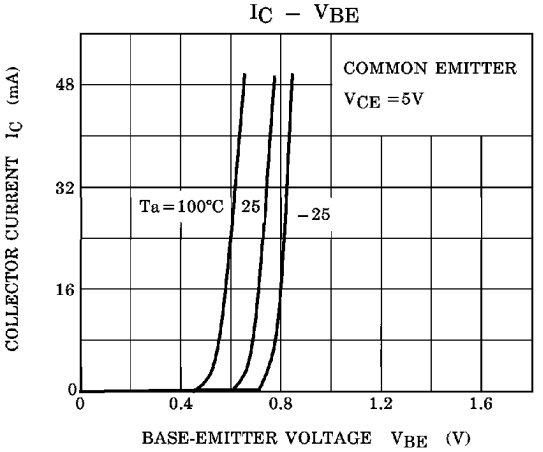
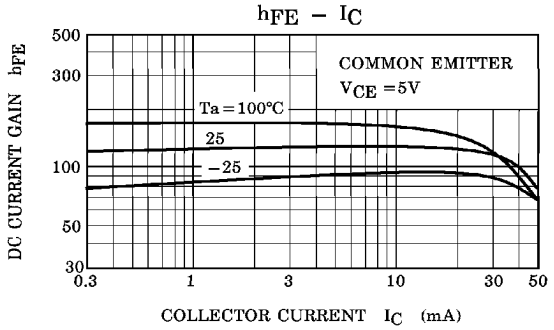
I_C – V_{CE}



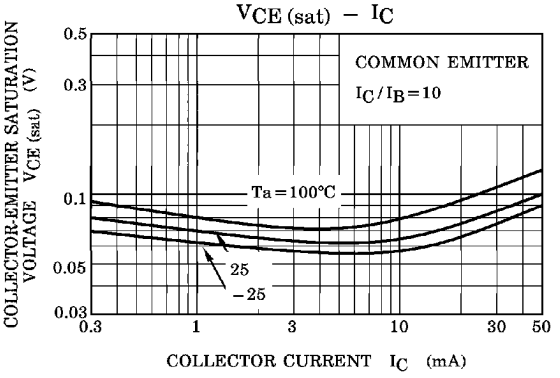
I_C – V_{BE}



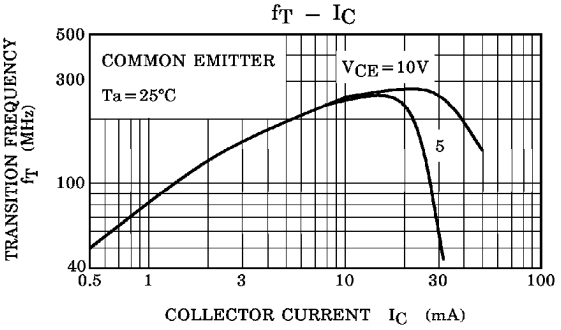
h_{FE} – I_C



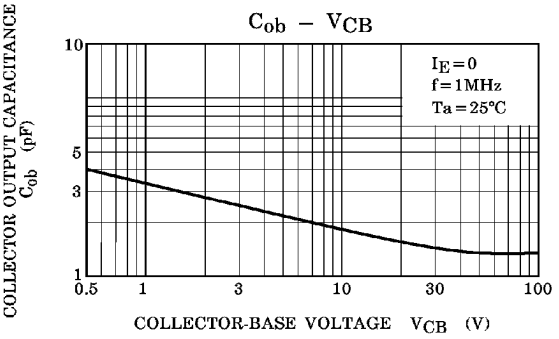
$V_{CE\,(sat)}$ – I_C



f_T – I_C



C_{ob} – V_{CB}



P_C – Ta