TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SB905

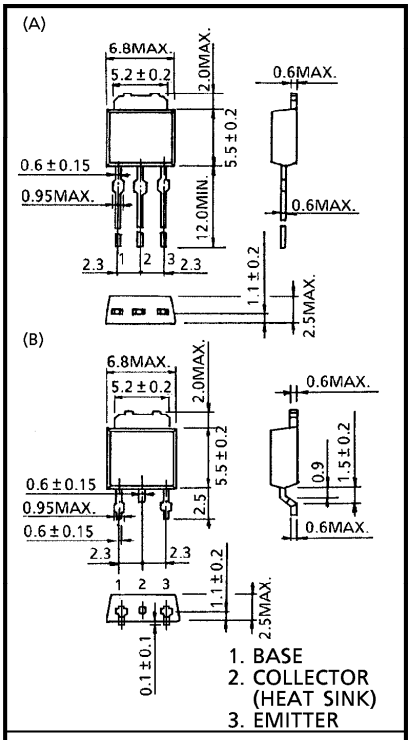
POWER AMPLIFIER APPLICATIONS

Unit in mm

- Complementary to 2SD1220

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}	−6	V
Collector Current		I_C	−1.5	A
Base Current		I_B	−1.0	A
Collector Power Dissipation	Ta = 25°C	P_C	1.0	W
	Tc = 25°C		10	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C



JEDEC	—
EIAJ	—
TOSHIBA	(A) 2-7B1A (B) 2-7B2A

Weight : 0.36 g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = −150 V, I_E = 0	—	—	−1.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = −6 V, I_C = 0	—	—	−1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = −10 mA, I_B = 0	−150	—	—	V
DC Current Gain	h_{FE} (Note)	V_{CE} = −5 V, I_C = −200 mA	60	—	320	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = −500 mA, I_B = −50 mA	—	—	−1.5	V
Base-Emitter Voltage	V_{BE}	V_{CE} = −5 V, I_C = −5 mA	−0.5	—	−0.8	V
Transition Frequency	f_T	V_{CE} = −5 V, I_C = −200 mA	15	50	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = −10 V, I_E = 0, f = 1 MHz	—	—	35	pF

Note : h_{FE} Classification R : 60~120, O : 100~200, Y : 160~320

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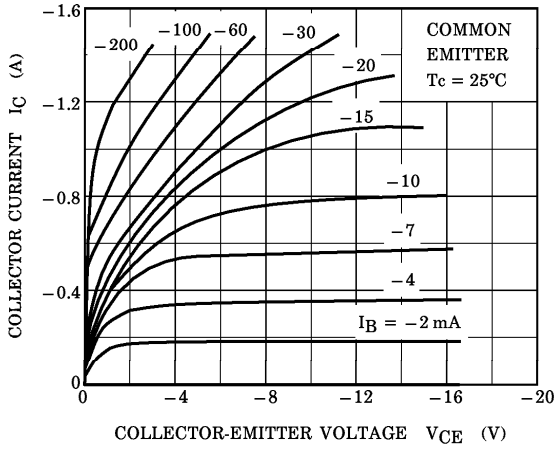
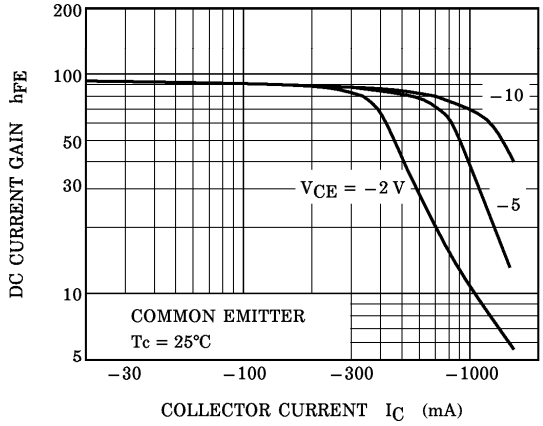
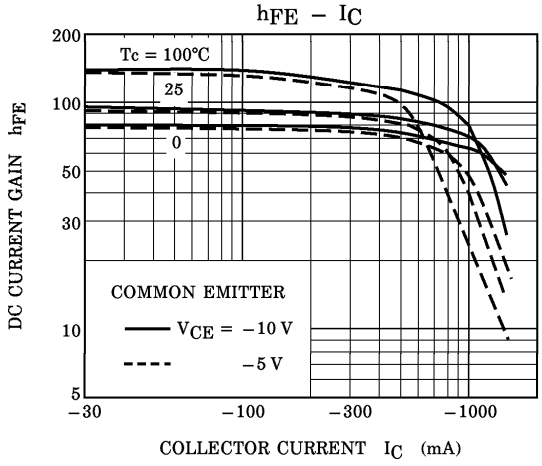
$I_C - V_{CE}$



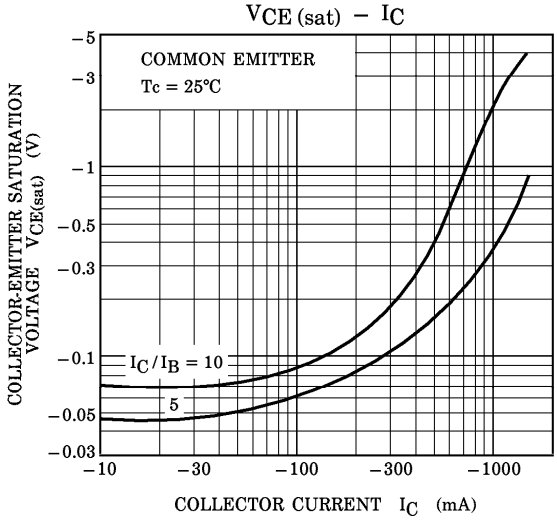
$h_{FE} - I_C$



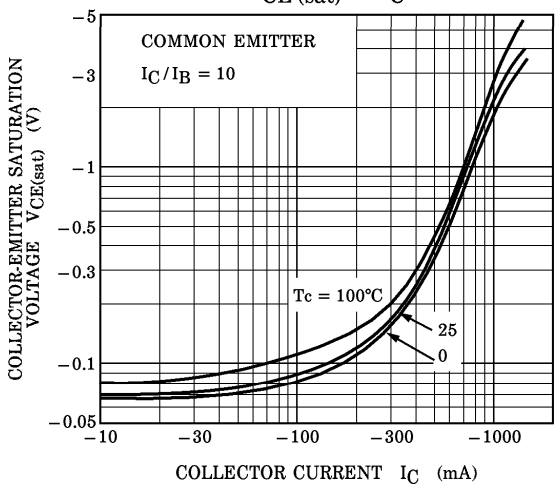
$h_{FE} - I_C$



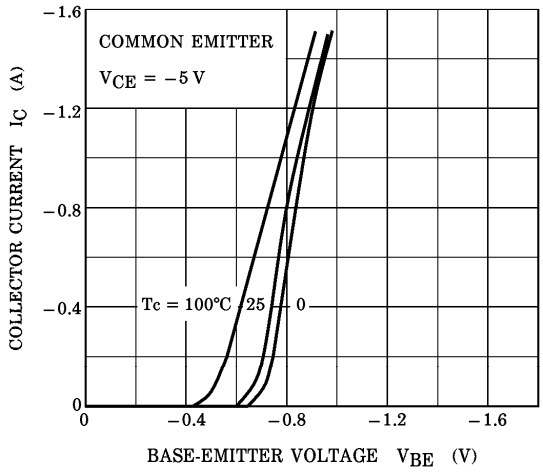
$V_{CE\,(sat)} - I_C$



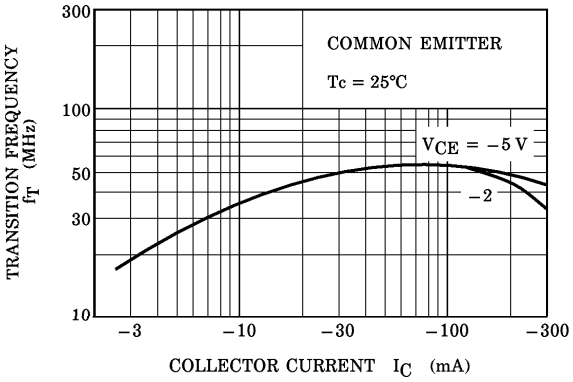
$V_{CE\,(sat)} - I_C$



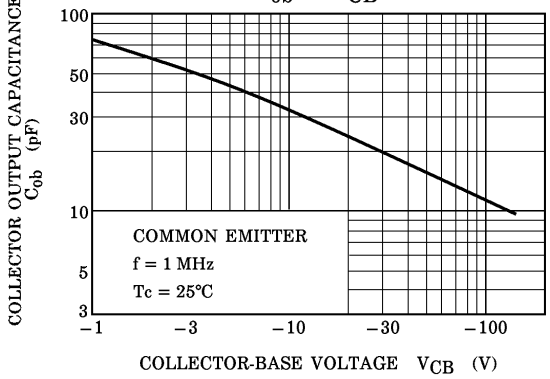
$I_C - V_{BE}$



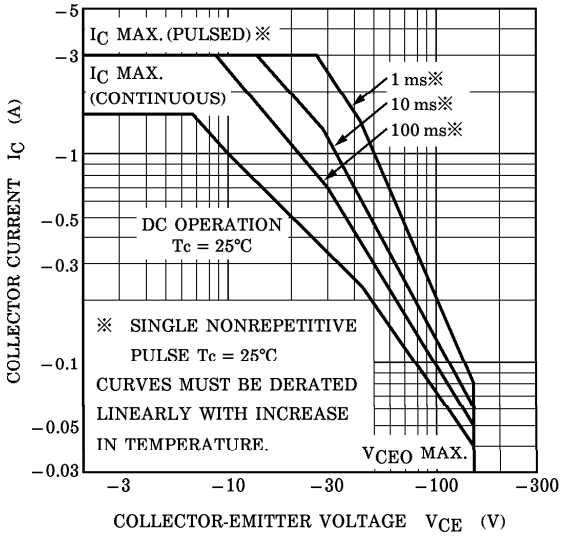
f_T – I_C



C_{ob} – V_{CB}



SAFE OPERATING AREA



P_C – Ta