TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

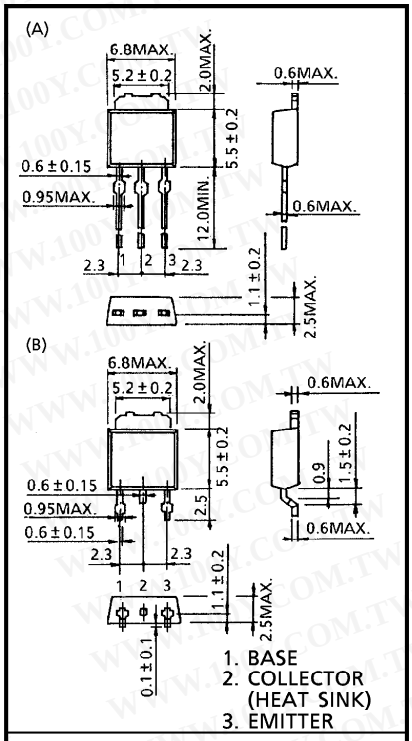
2SC2983

POWER AMPLIFIER APPLICATIONS

DRIVER STAGE AMPLIFIER APPLICATIONS

- High Transition Frequency : f_T = 100 MHz (Typ.)
- Complementary to 2SA1225

Unit in mm



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

Weight : 0.36 g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	160	V
Collector-Emitter Voltage		V_{CEO}	160	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	1.5	A
Base Current		I_B	0.3	A
Collector Power Dissipation	Ta = 25°C	P_C	1.0	W
	Tc = 25°C		15	
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} = 160 V, I_E = 0	—	—	1.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5 V, I_C = 0	—	—	1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10 mA, I_B = 0	160	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 1 mA, I_C = 0	5	—	—	V
DC Current Gain	h_{FE} (Note)	V_{CE} = 5 V, I_C = 100 mA	70	—	240	
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 = 500 mA	—	—	1.0	V
Transition Frequency	f_T	V_{CE} = 10 V, I_C = 100 mA	—	100	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz	—	25	—	pF

Note : h_{FE} Classification O : 70~140, Y : 120~240

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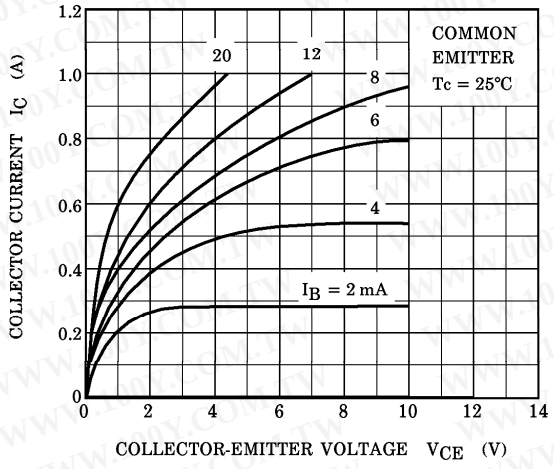
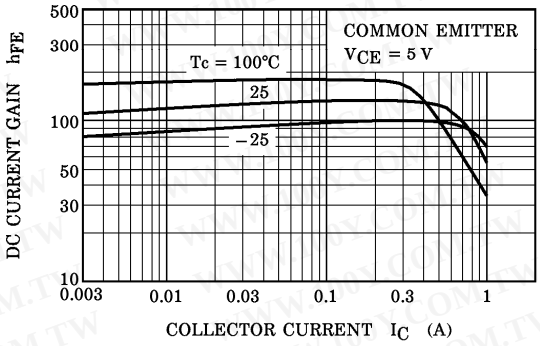
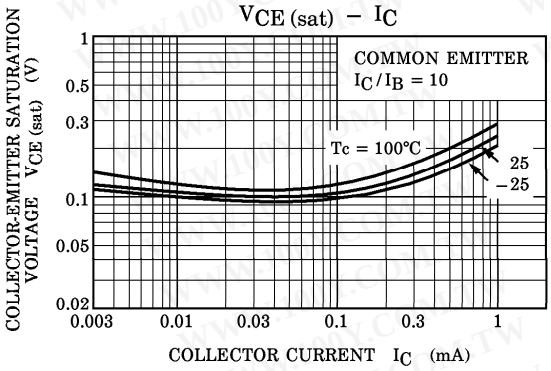
I_C – V_{CE}



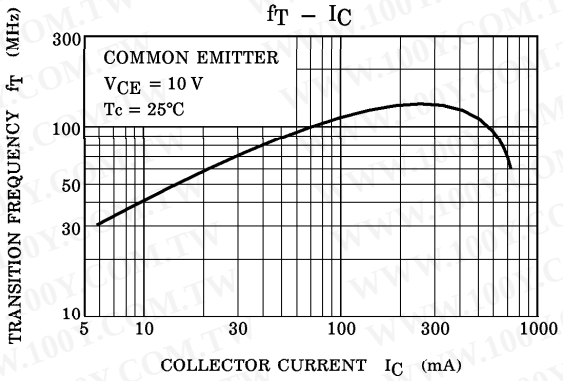
h_{FE} – I_C



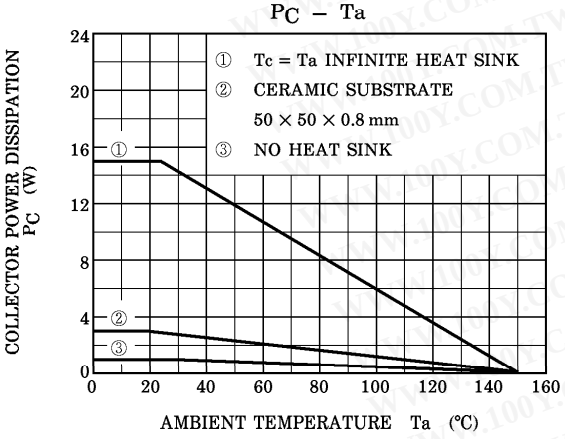
$V_{CE\,(sat)}$ – I_C



f_T – I_C



P_C – Ta



SAFE OPERATING AREA