SEMICONDUCTOR

TOSHIBA

TECHNICAL DATA

TOSHIBA TRANSISTOR

2SA1302

SILICON PNP TRIPLE DIFFUSED TYPE

(2SA1302)

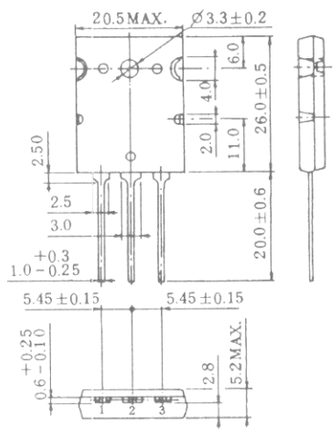
POWER AMPLIFIER APPLICATIONS.

- Complementary to 2SC3281
- Recommend for 100W High Fidelity Audio Frequency Amplifier Output Stage.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−200	V
Collector-Emitter Voltage	V_{CEO}	−200	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−15	A
Base Current	I_B	−1.5	A
Collector Power Dissipation (Tc = 25°C)	P_C	150	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2-21F1A

Weight : 9.75g

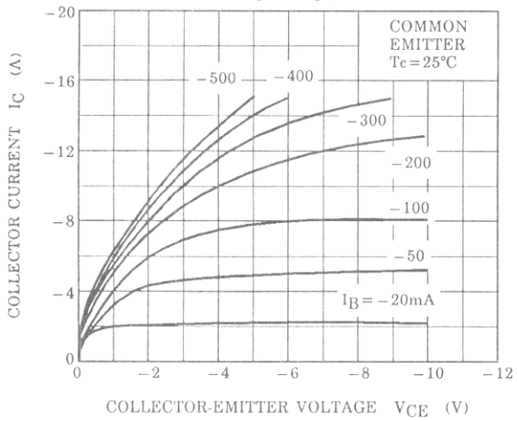
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = −200V, I_E = 0	—	—	−5.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = −5V, I_C = 0	—	—	−5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = −50mA, I_B = 0	−200	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	V_{CE} = −5V, I_C = −1A	55	—	160	
	$h_{FE(2)}$	V_{CE} = −5V, I_C = −8A	35	60	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = −10A, I_B = −1A	—	−1.5	−3.0	V
Base-Emitter Voltage	V_{BE}	V_{CE} = −5V, I_C = −8A	—	−1.0	−1.5	V
Transition Frequency	f_T	V_{CE} = −5V, I_C = −1A	—	25	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = −10V, I_E = 0, f = 1MHz	—	470	—	pF

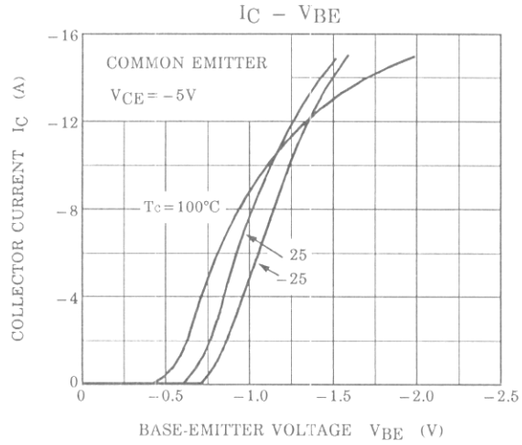
Note : $h_{FE(1)}$ Classification R : 55~110, O : 80~160

(2SA1302)

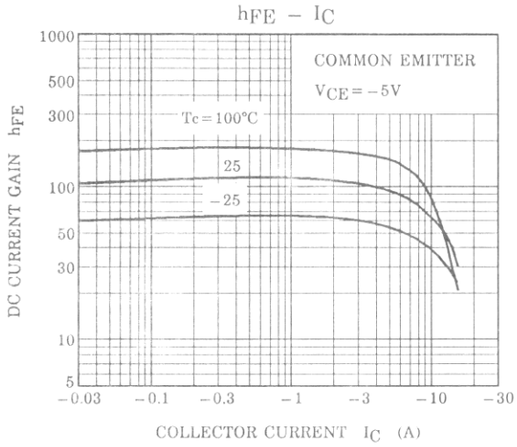
$I_C - V_{CE}$



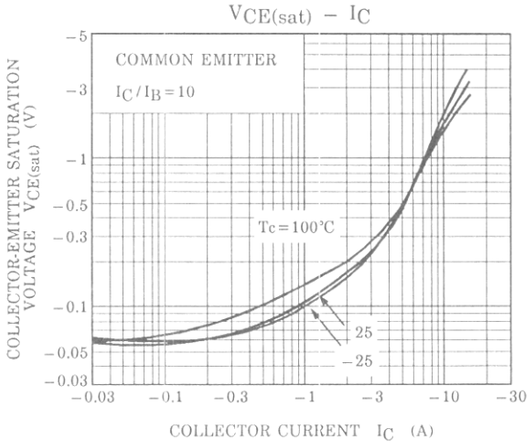
$I_C - V_{BE}$



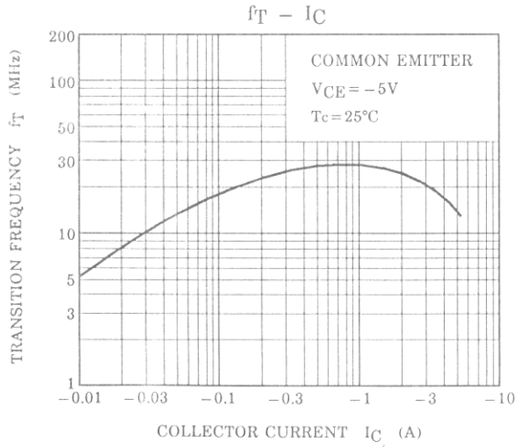
$h_{FE} - I_C$



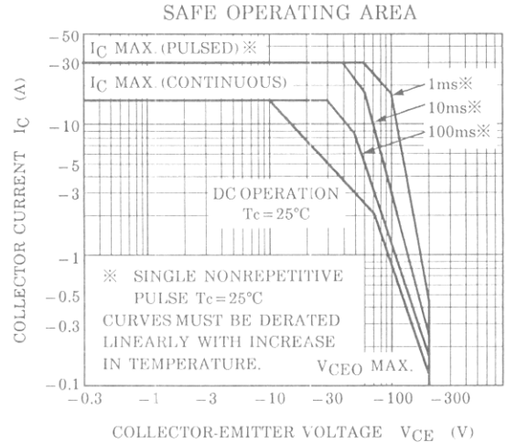
$V_{CE(sat)} - I_C$



$f_T - I_C$



SAFE OPERATING AREA



SEMICONDUCTOR

TOSHIBA

TECHNICAL DATA

TOSHIBA TRANSISTOR

2SA1302

SILICON PNP TRIPLE DIFFUSED TYPE

(2SA1302)

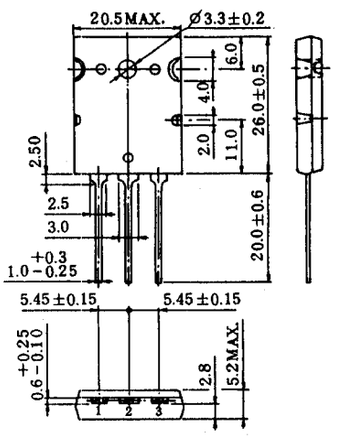
POWER AMPLIFIER APPLICATIONS.

- Complementary to 2SC3281
- Recommend for 100W High Fidelity Audio Frequency Amplifier Output Stage.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−200	V
Collector-Emitter Voltage	V_{CEO}	−200	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−15	A
Base Current	I_B	−1.5	A
Collector Power Dissipation (Tc = 25°C)	P_C	150	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2-21F1A

Weight : 9.75g

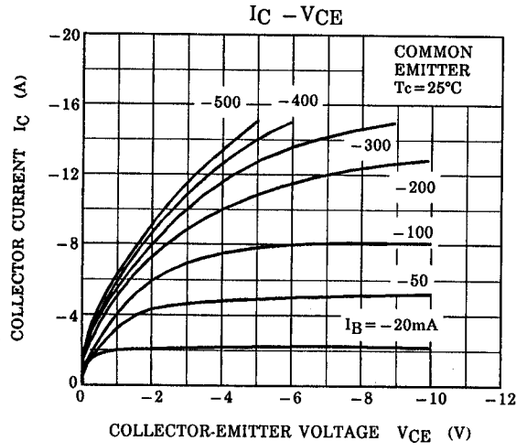
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = −200V, I_E = 0	—	—	−5.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = −5V, I_C = 0	—	—	−5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = −50mA, I_B = 0	−200	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	V_{CE} = −5V, I_C = −1A	55	—	160	
	$h_{FE(2)}$	V_{CE} = −5V, I_C = −8A	35	60	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = −10A, I_B = −1A	—	−1.5	−3.0	V
Base-Emitter Voltage	V_{BE}	V_{CE} = −5V, I_C = −8A	—	−1.0	−1.5	V
Transition Frequency	f_T	V_{CE} = −5V, I_C = −1A	—	25	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = −10V, I_E = 0, f = 1MHz	—	470	—	pF

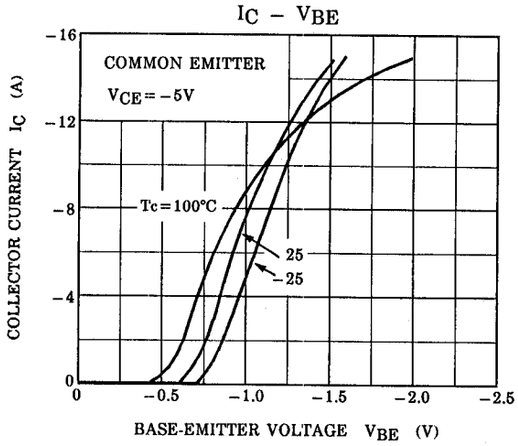
Note : $h_{FE(1)}$ Classification R : 55~110, O : 80~160

(2SA1302)

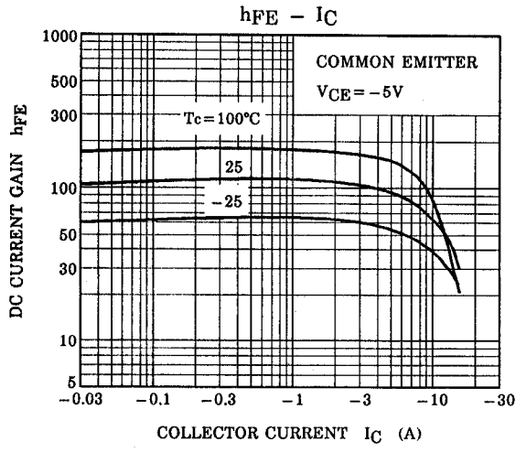
$I_C - V_{CE}$



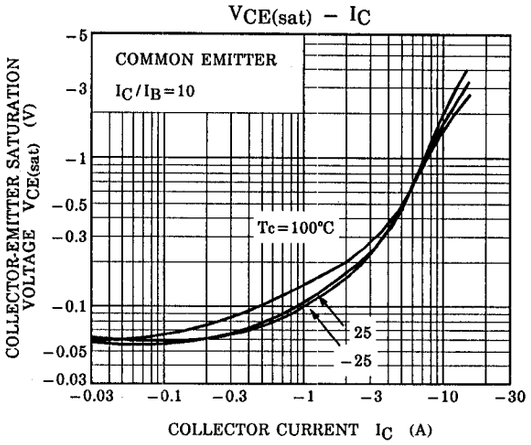
$I_C - V_{BE}$



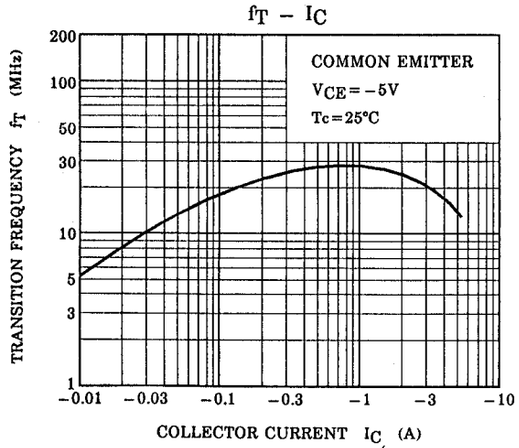
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$f_T - I_C$



SAFE OPERATING AREA