Transistor

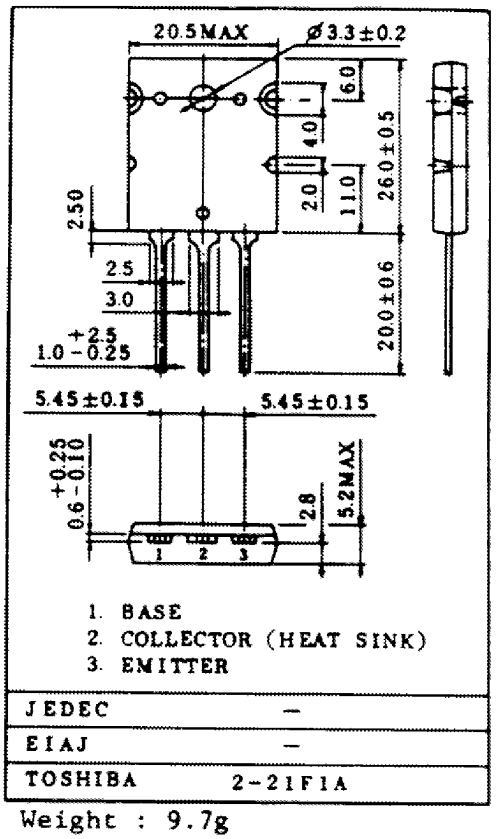
Silicon PNP Epitaxial Type (PCT Process)

Power Amplifier Applications

Features

- Complementary to 2SD2155
- Recommend for 100W High Fidelity Audio Frequency
  - Amplifier Output Stage

Unit in mm



Absolute Maximum Ratings (Ta = 25°C)

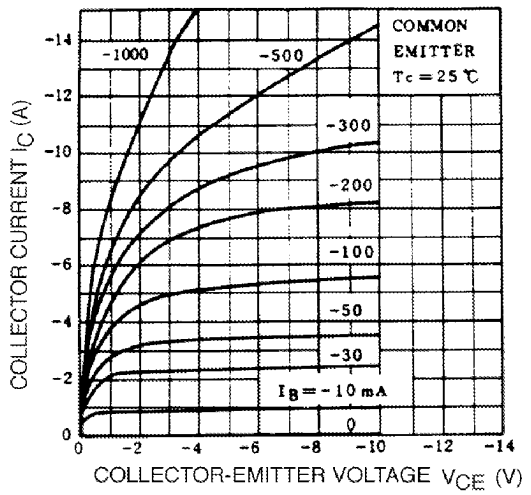
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-180	V
Collector-Emitter Voltage	V_{CEO}	-180	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-15	A
Base Current	I_B	-1.5	A
Collector PowerDissipation (Tc = 25°C)	P_C	150	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

Electrical Characteristics (Ta = 25°C)

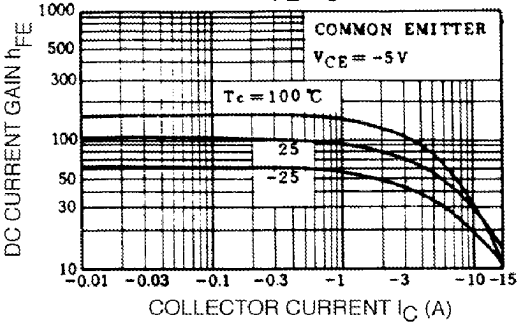
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = -180V, I_E = 0	–	–	–5.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0	–	–	-5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)\ CEO}$	I_C = -50mA, I_B=0	-180	–	–	V
DC Current Gain	$h_{FE(1)(Note)}$	V_{CE} = -5V, I_C = -1A	55	–	160	
	$h_{FE(2)}$	V_{CE} = -5V, I_C = -6A	30	–	–	
Collector-Emitter Satiration Voltage	$V_{CE(sat)}$	I_C = -8A, I_B = -0.8A	–	–	-3.0	V
Base-Emitter Voltage	V_{BE}	V_{CE} = -5V, I_C = -6A	–	–	-1.5	V
Transition Frequency	f_T	V_{CE} = -5V, I_C = -1A	–	10	–	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = -10V, I_E = 0, f = 1MHz	–	340	–	pF

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

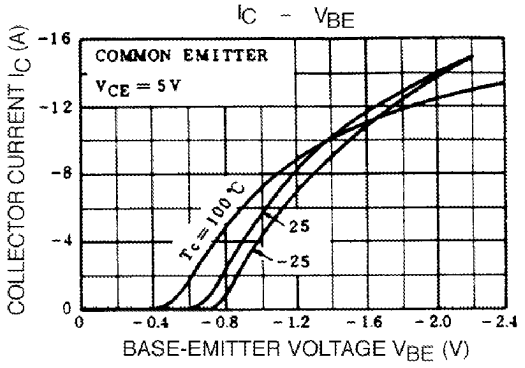
I_C – V_{CE}



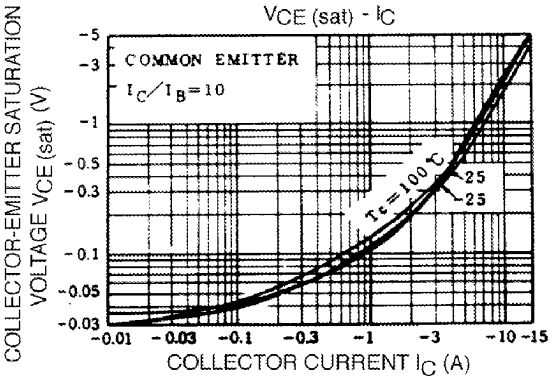
h_{FE} - I_C



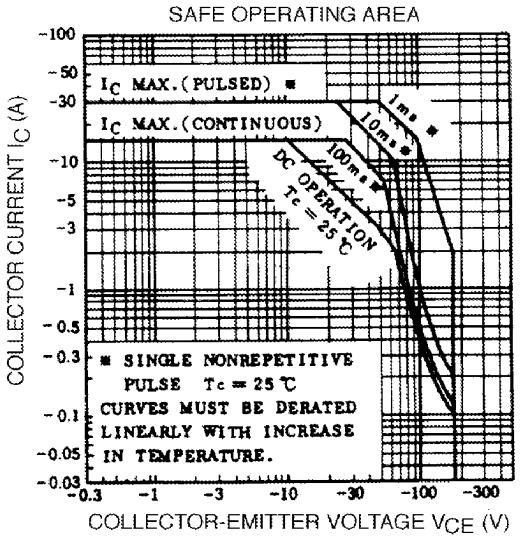
I_C – V_{BE}



V_{CE} (sat) - I_C



SAFE OPERATING AREA



P_C – Ta