

π Transistor

Silicon NPN Triple Diffused Type (PCT Process) Audio Frequency

Power Amplifier Applications

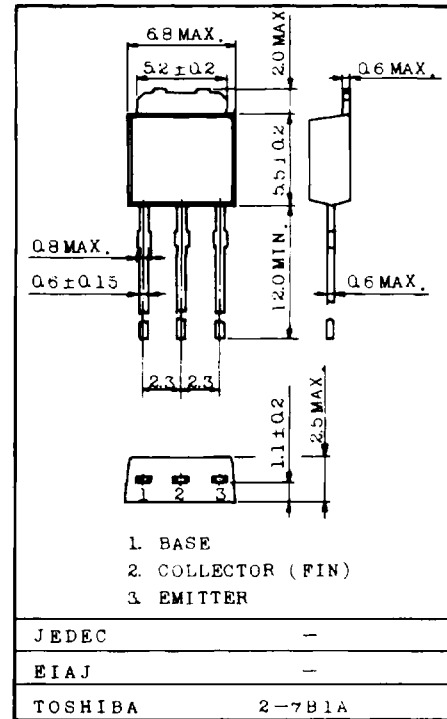
Features

- Low Collector Saturation Voltage
 - $V_{CE(sat)} = 0.4V$ (Typ.) ($I_C = 3A$, $I_B = 0.3A$)
- High Power Dissipation
 - $P_C = 20W$ ($T_C = 25^\circ C$)
- Complementary to 2SB906

Absolute Maximum Ratings ($T_a = 25^\circ C$)

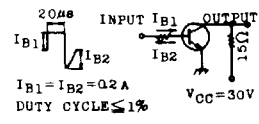
CHARACTERISTIC	SYMBOL	RATING	UNIT	
Collector-Base Voltage	V_{CBO}	60	V	
Collector-Emitter Voltage	V_{CEO}	60	V	
Emitter-Base Voltage	V_{EB0}	7	V	
Collector Current	I_C	3	A	
Base Current	I_B	0.5	A	
Collector Power Dissipation	P_C	$T_a = 25^\circ C$	1.0	W
		$T_C = 25^\circ C$	20	
Junction Temperature	T_j	150	$^\circ C$	
Storage Temperature Range	T_{sg}	-55 - 150	$^\circ C$	

Unit in mm



Weight : 0.35g

Electrical Characteristics (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -6V, I_E = 0$	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -7V, I_C = 0$	-	-	100	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 50mA, I_B = 0$	60	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE} = 5V, I_C = 0.5mA$	60	-	300	
		$h_{FE(2)}$	$V_{CE} = 5V, I_C = 3A$	20	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 3A, I_B = 0.3A$	-	0.4	1.0	V
Base-Emitter Voltage		V_{BE}	$I_C = 5A, I_B = 0.5A$	-	0.7	1.0	V
Transition Frequency		f_T	$V_{CE} = 5V, I_C = 0.5A$	-	3.0	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	70	-	pF
Switching Time	Turn-on Time	t_{on}	 <p>$I_{B1} = I_{B2} = 0.2A$ DUTY CYCLE $\leq 1\%$ $V_{CC} = 30V$</p>	-	0.8	-	μs
	Storage Time	t_{sg}		-	1.5	-	
	Fall Time	t_f		-	0.8	-	

Note: h_{FE} Classification 0: 60 ~ 120, Y: 100 ~ 200, GR: 150 ~ 300

