

2SD1406

SILICON NPN TRIPLE DIFFUSED TYPE

AUDIO FREQUENCY POWER AMPLIFIER APPLICATIONS.

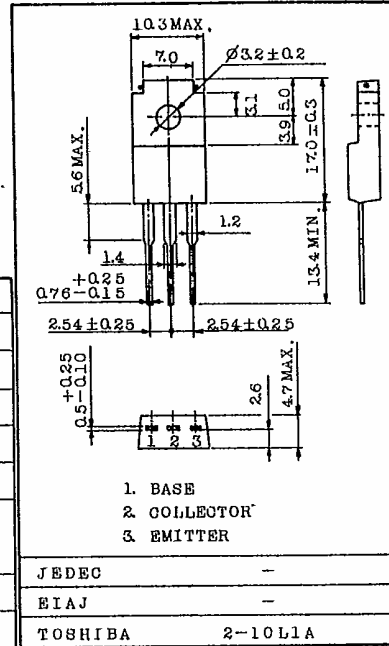
Unit in mm

FEATURES:

- High DC Current Gain : $h_{FE}=300(\text{Max.})(V_{CE}=5V, I_C=0.5A)$
- Low Saturation Voltage
: $V_{CE}(\text{sat})=1.0V(\text{Max.})(I_C=3A, I_B=0.3A)$
- High Power Dissipation : $P_C=25W (T_c=25^\circ\text{C})$
- Complementary to 2SB1015

MAXIMUM RATINGS (Ta=25°C)

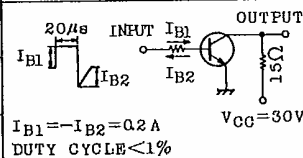
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	60	V
Collector-Emitter Voltage	V _{CEO}	60	V
Emitter-Base Voltage	V _{EB0}	7	V
Collector Current	I _C	3	A
Base Current	I _B	0.5	A
Collector Power Dissipation	P _C	T _a =25°C	2.0
		T _c =25°C	25
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 ~ 150	°C



Weight : 2.1g

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CB0}	V _{CB} =60V, I _E =0	-	-	100	μA
Emitter Cut-off Current	I _{EB0}	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} (Note)	V _{CE} =5V, I _C =0.5A	60	-	300	-
Collector Emitter Saturation Voltage	V _{CE} (sat)	I _C =3A, I _B =0.3A	-	0.25	1.0	V
Base-Emitter Voltage	V _{BE}	V _{CE} =5V, I _C =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}	-	0.8	-	μs
	Storage Time	t _{stg}	-	1.5	-	
	Fall Time	t _f	-	0.8	-	



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

TOSHIBA CORPORATION

