

2SD1405

SILICON NPN TRIPLE DIFFUSED TYPE

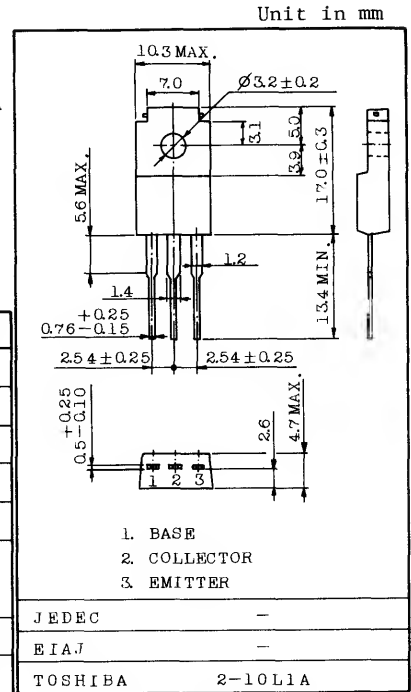
AUDIO FREQUENCY POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High DC Current Gain of 200 to 1200 at $V_{CE}=5V$, $I_C=0.5A$
- Low $V_{CE(sat)}$ of 1.0V (Max.) at $I_C=1A$, $I_B=0.02A$
- Collector Power Dissipation of 25W at $T_c=25^\circ C$

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	50	V
Collector-Emitter Voltage	V_{CEO}	50	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	$T_a=25^\circ C$	2.0
		$T_c=25^\circ C$	25
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ C$



Weight : 2.1g

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I_{CB0}	$V_{CB}=50V$, $I_E=0$	-	-	100	μA	
Emitter Cut-off Current	I_{EB0}	$V_{EB}=7V$, $I_C=0$	-	-	100	μA	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50mA$, $I_B=0$	50	-	-	V	
DC Current Gain	h_{FE} (Note)	$V_{CE}=5V$, $I_C=0.5A$	200	-	1200		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A$, $I_B=0.02A$	-	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	$V_{CE}=5V$, $I_C=0.5A$	-	5.0	-	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=1MHz$	-	70	-	pF	
Switching Time	Turn-on Time	t_{on}			-	2.0	-
	Storage Time	t_{stg}	-	5.0	-	μs	
	Fall Time	t_f	-	3.0	-		

Note : h_{FE} Classification GR : 200 ~ 400, BL : 350 ~ 700, V : 600 ~ 1200

TOSHIBA CORPORATION

