

# 2SD1407

SILICON NPN TRIPLE DIFFUSED TYPE

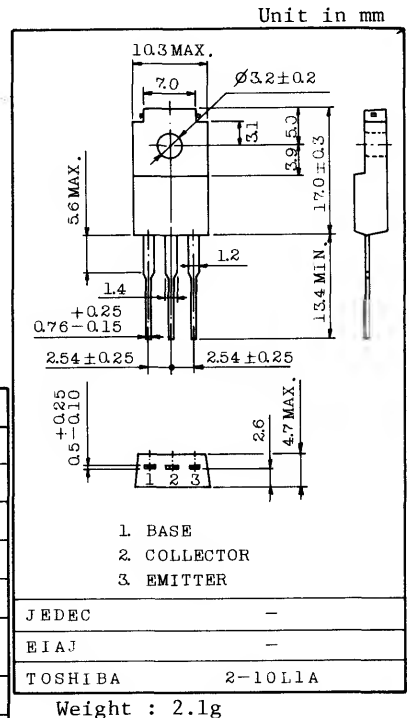
POWER AMPLIFIER APPLICATIONS.

**FEATURES:**

- High Breakdown Voltage :  $V_{CE0}=100V$
- Low Collector Saturation Voltage :  $V_{CE(sat)}=2.0V(\text{Max.})$
- Complementary to 2SB1016
- Recommended for 30W High Fidelity Audio Frequency Amplifier Output Stage.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	100	V
Collector-Emitter Voltage	$V_{CE0}$	100	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	5	A
Base Current	$I_B$	0.5	A
Collector Power Dissipation ( $T_c=25^\circ C$ )	$P_C$	30	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ C$



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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=100V, I_E=0$	-	-	100	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	1	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C=50mA, I_B=0$	100	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=5V, I_C=1A$	40	-	240	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=4A$	20	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A, I_B=0.4A$	-	-	2.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=5V, I_C=1A$	-	-	1.5	V
Transition Frequency	$f_T$	$V_{CE}=5V, I_C=1A$	-	12	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	100	-	pF

Note :  $h_{FE(1)}$  Classification R : 40 ~ 80, O : 70 ~ 140, Y : 120 ~ 240

