

(SMALL-SIGNAL TRANSISTOR)

**2SD1447**

**FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE**

**DESCRIPTION**

2SD1447 is a silicon NPN epitaxial type transistor designed for 2 to 3.5W output low frequency power amplify application.  
Complementary with 2SB1035.

**FEATURE**

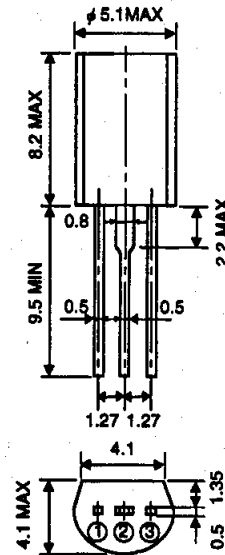
- High collector current  $I_{CM} = 1.5A$
- High gain band width product  $f_T = 100MHz$  typ
- High collector dissipation  $P_C = 900mW$
- Excellent linearity of DC forward current gain

**APPLICATION**

2 to 3.5W output low frequency amplify circuit of radio, cassette tape recorder, mini stereo.

**OUTLINE DRAWING**

Unit:mm



**TERMINAL CONNECTOR**

- ① : EMITTER      EIAJ : —
- ② : COLLECTOR    JEDEC : —
- ③ : BASE

Note)  
The dimension without tolerance represent central value.

**MAXIMUM RATINGS (Ta=25°C)**

Symbol	Parameter	Ratings	Unit
V <sub>CB0</sub>	Collector to Base voltage	30	V
V <sub>EB0</sub>	Emitter to Base voltage	4	V
V <sub>CE0</sub>	Collector to Emitter voltage	25	V
I <sub>CM</sub>	Peak Collector current	1.5	A
I <sub>C</sub>	Collector current	1	A
P <sub>C</sub>	Collector dissipation (Ta=25°C)	900	mW
T <sub>J</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55 to +150	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

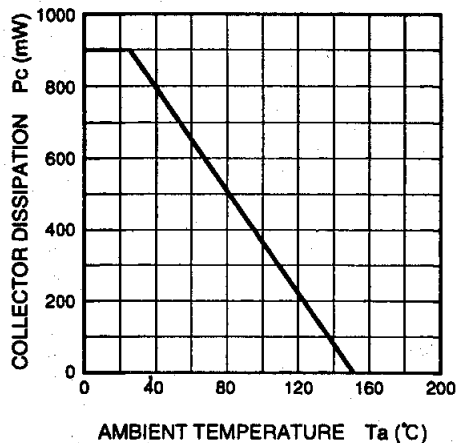
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V <sub>(BR)CBO</sub>	C to B break down voltage	I <sub>C</sub> = 10 μA, I <sub>E</sub> = 0	30			V
V <sub>(BR)EBO</sub>	E to B break down voltage	I <sub>E</sub> = 10 μA, I <sub>C</sub> = 0	4			V
V <sub>(BR)CEO</sub>	C to E break down voltage	I <sub>C</sub> = 100 μA, R <sub>BE</sub> = ∞	25			V
I <sub>CB0</sub>	Collector cut off current	V <sub>CB</sub> = 25V, I <sub>E</sub> = 0			1	μA
I <sub>EB0</sub>	Emitter cut off current	V <sub>EB</sub> = 2V, I <sub>C</sub> = 0			1	μA
h <sub>FE</sub> *	DC forward current gain	V <sub>CE</sub> = 1V, I <sub>C</sub> = 500mA	55		300	-
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> = 500mA, I <sub>B</sub> = 25mA			0.5	V
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> = 6V, I <sub>E</sub> = -10mA		100		MHz

\* : It shows h<sub>FE</sub> classification in right table.

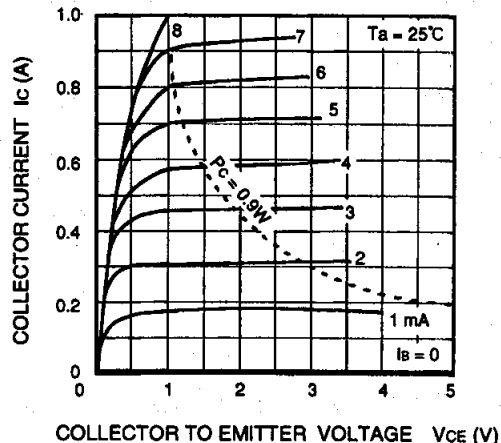
Item	C	D	E
h <sub>FE</sub>	55 to 110	90 to 180	150 to 300

**TYPICAL CHARACTERISTICS**

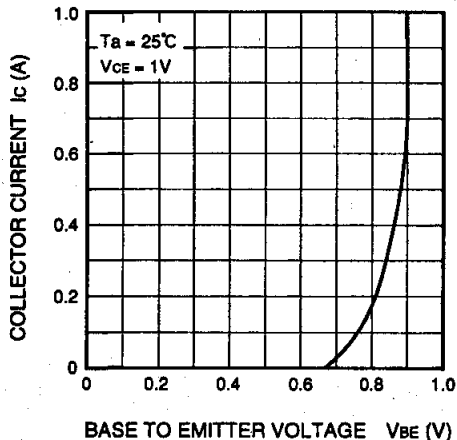
**COLLECTOR DISSIPATION VS.  
AMBIENT TEMPERATURE**



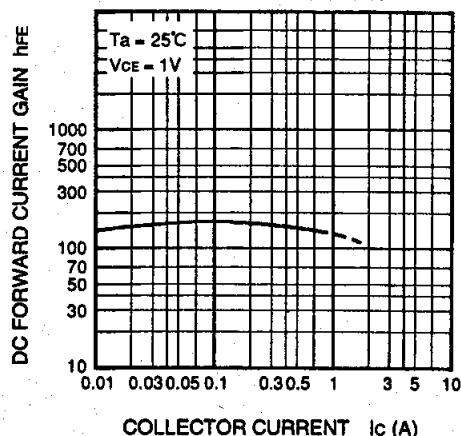
**COMMON EMITTER OUTPUT**



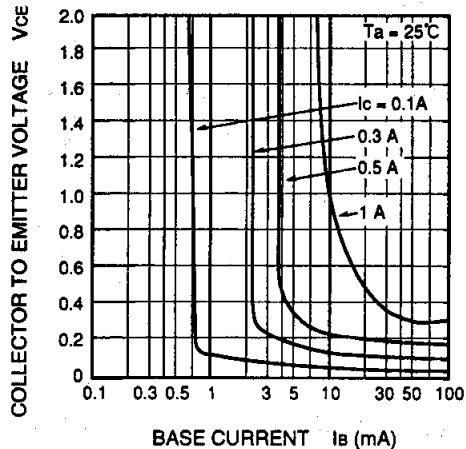
**COMMON EMITTER TRANSFER**



**DC FORWARD CURRENT GAIN VS.  
COLLECTOR CURRENT**



**COLLECTOR TO EMITTER SATURATION  
VOLTAGE VS. BASE CURRENT**



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