

**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

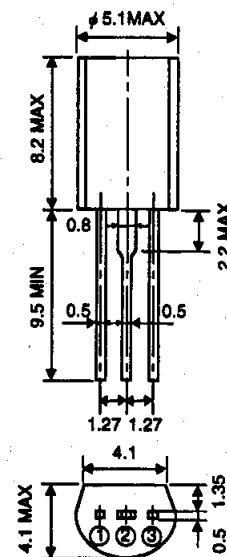
- High collector current $I_{CM} = 1.5A$
- High gain band width product $f_T = 100MHz$ typ
- High collector dissipation $P_C = 900mW$
- Excellent linearity of DC forward current gain

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

(Note)

The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Rating	Unit
V_{CB0}	Collector to Base voltage	30	V
V_{EB0}	Emitter to Base voltage	4	V
V_{CE0}	Collector to Emitter voltage	25	V
I_{CM}	Peak Collector current	1.5	A
I_C	Collector current	1	A
P_C	Collector dissipation (Ta=25°C)	900	mW
T_J	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

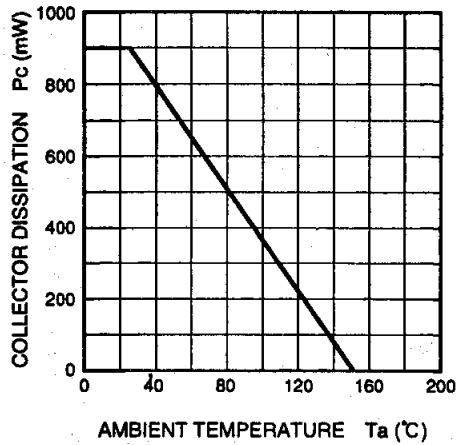
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C = 10 \mu A, I_E = 0$	30			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E = 10 \mu A, I_C = 0$	4			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C = 100 \mu A, R_{BE} = \infty$	25			V
I_{CBO}	Collector cut off current	$V_{CB} = 25V, I_E = 0$			1	μA
I_{EBO}	Emitter cut off current	$V_{EB} = 2V, I_C = 0$			1	μA
$h_{FE} *$	DC forward current gain	$V_{CE} = 1V, I_C = 500mA$	55		300	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C = 500mA, I_B = 25mA$			0.5	V
f_T	Gain band width product	$V_{CE} = 6V, I_E = -10mA$		100		MHz

* : It shows h_{FE} classification in right table.

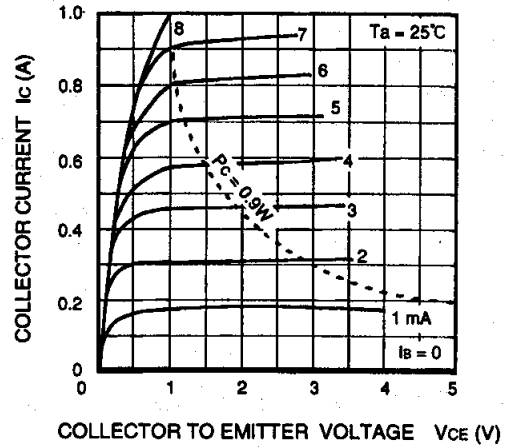
Item	C	D	E
h_{FE}	55 to 110	90 to 180	150 to 300

TYPICAL CHARACTERISTICS

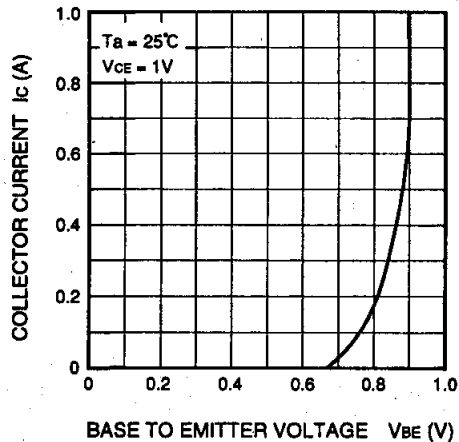
**COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE**



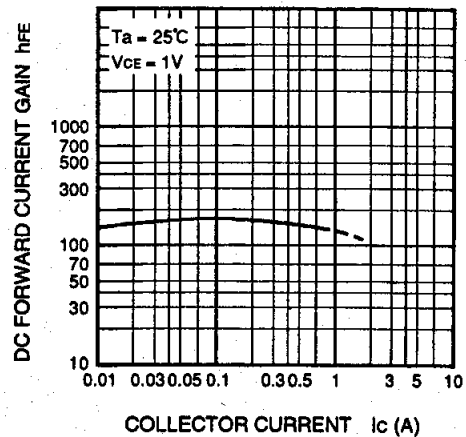
COMMON EMITTER OUTPUT



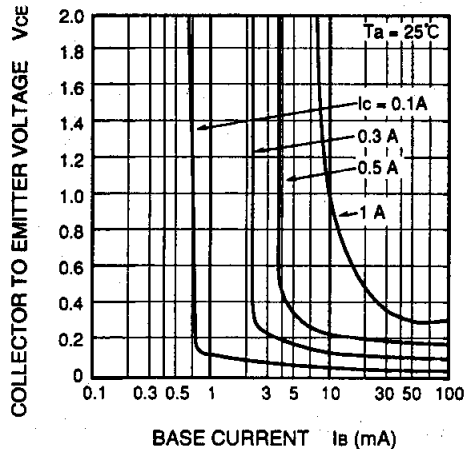
COMMON EMITTER TRANSFER



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



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





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