

(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

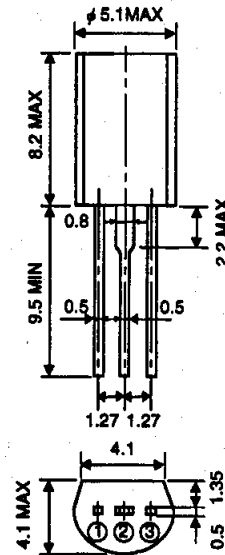
- High collector current $I_{CM} = 1.5A$
- High gain band width product $f_T = 100MHz$ typ
- High collector dissipation $P_C = 900mW$
- Excellent linearity of DC forward current gain

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

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	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)

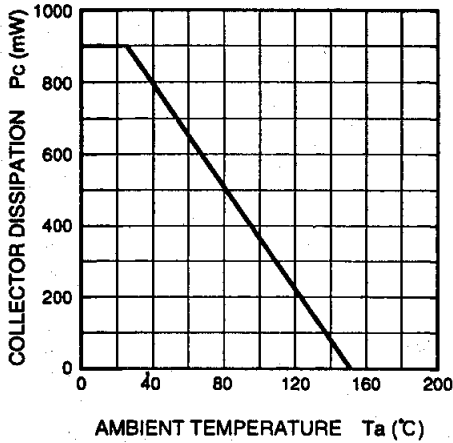
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{(BR)CBO}	C to B break down voltage	I _C = 10 μA, I _E = 0	30			V
V _{(BR)EBO}	E to B break down voltage	I _E = 10 μA, I _C = 0	4			V
V _{(BR)CEO}	C to E break down voltage	I _C = 100 μA, R _{BE} = ∞	25			V
I _{CB0}	Collector cut off current	V _{CB} = 25V, I _E = 0			1	μA
I _{EB0}	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.

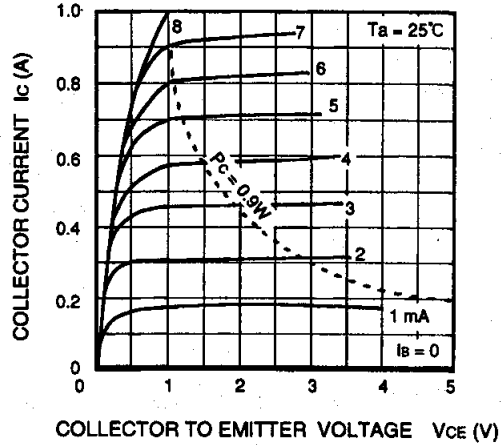
Item	C	D	E
h _{FE}	55 to 110	90 to 180	150 to 300

TYPICAL CHARACTERISTICS

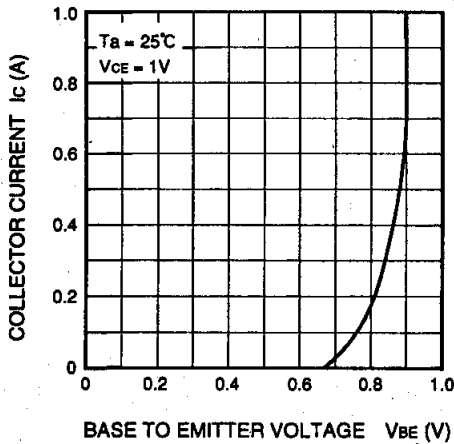
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



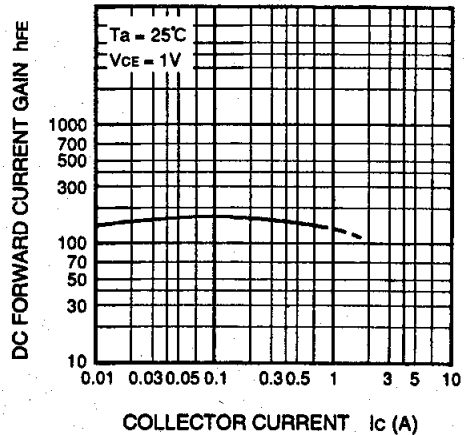
COMMON EMITTER OUTPUT



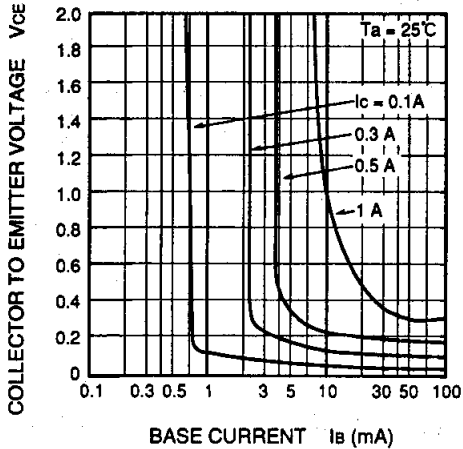
COMMON EMITTER TRANSFER



DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. BASE CURRENT



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