2SA1947

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

Mitsubishi 2SA1947 is a resin sealed silicon PNP epitaxial type transistor. It is designed with high collector current and 2 to 3.5W low frequency power amplify.

Complementary with 2SC5214.

FEATURE

- ●High fT fT=100MHz typ
- ●Excellent linearity of DC forward current gain
- ●High collector current ICM=-1.5A
- ●Small package for mounting

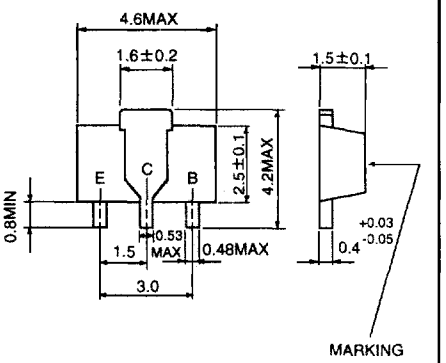
APPLICATION

Radio, tape recorder, small type stereo, etc.

Low frequency power amplify circuit with 2 to 3.5W output.

OUTLINE DRAWING

Unit:mm



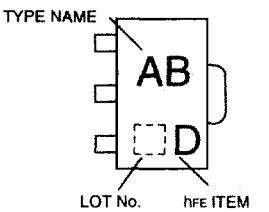
TERMINAL CONNECTOR

E : EMITTER
C : COLLECTOR
B : BASE

EIAJ : SC-62
JEDEC : –

Note)
The dimension without tolerance represent central value.

MARKING



MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	-30	V
V_{EBO}	Emitter to Base voltage	-4	V
V_{CEO}	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℃)	500	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C=-10μA,I_E=0	-30			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=-10μA,I_C=0	-4			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=-100μA,R_{BE}=∞	-25			V
I_{CBO}	Collector cut off current	V_{CB}=-25V,I_E=0			-1	μA
I_{EBO}	Emitter cut off current	V_{BE}=-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.

Marking	ABC	ABD	ABE
h_{FE}	55 to 110	90 to 180	150 to 300

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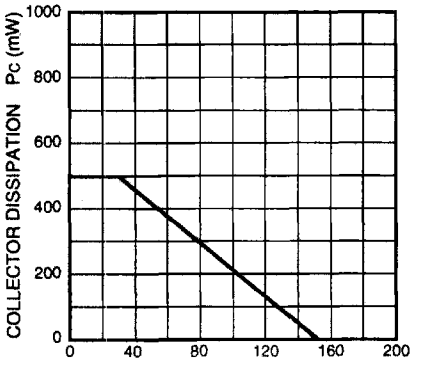
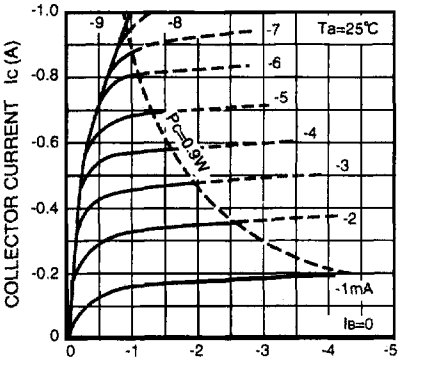
TYPICAL CHARACTERISTICS

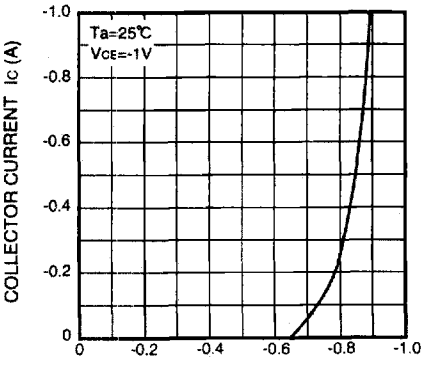
COLLECTOR DISSIPATION VS.AMBIENT TEMPERATURE



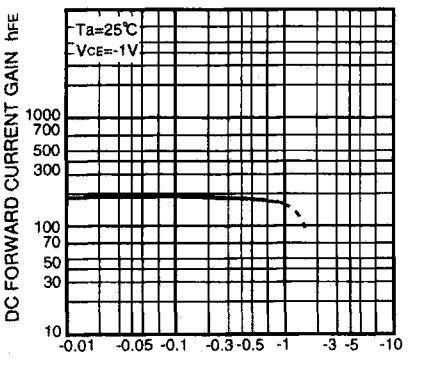
COMMON EMITTER OUTPUT



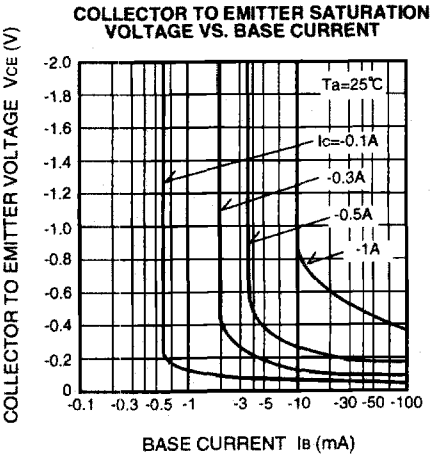
COMMON EMITTER TRANSFER



DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



MITSUBISHI ELECTRIC