

DESCRIPTION

Mitsubishi 2SA1946 is a resin sealed silicon PNP epitaxial type transistor. It is designed with high collector current and small $V_{CE(sat)}$.

Complementary with 2SC5212.

FEATURE

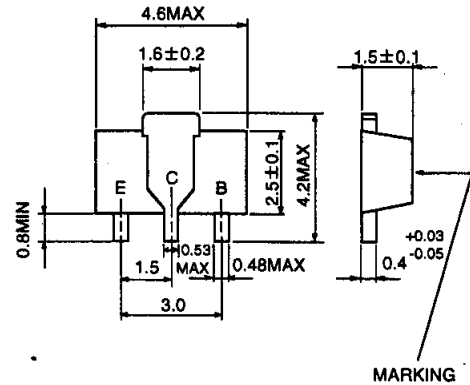
- Low collector saturation voltage
 $V_{CE(sat)} = -0.25V$ typ
- High f_T $f_T = 180MHz$ typ
- Excellent linearity of DC forward current gain
- High collector current $I_{CM} = -1A$
- Small package for mounting

APPLICATION

For relay drive, small motor drive, power supply application.

OUTLINE DRAWING

Unit:mm

**TERMINAL CONNECTOR**

E : EMITTER
C : COLLECTOR
B : BASE

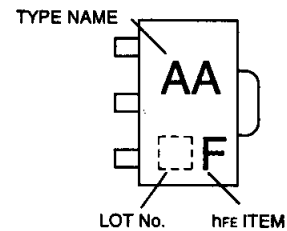
EIAJ : SC-62
JEDEC : -

Note)

The dimension without tolerance represent central value.

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

Symbol	Parameter	Ratings	Unit
V_{CB0}	Collector to Base voltage	-25	V
V_{EB0}	Emitter to Base voltage	-4	V
V_{CE0}	Collector to Emitter voltage	-20	V
I_{CM}	Peak collector current	-1	A
I_C	Collector current	-700	mA
P_C	Collector dissipation ($T_a = 25^\circ C$)	500	mW
T_j	Junction temperature	+150	$^\circ C$
T_{stg}	Storage temperature	-55 to +150	$^\circ C$

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

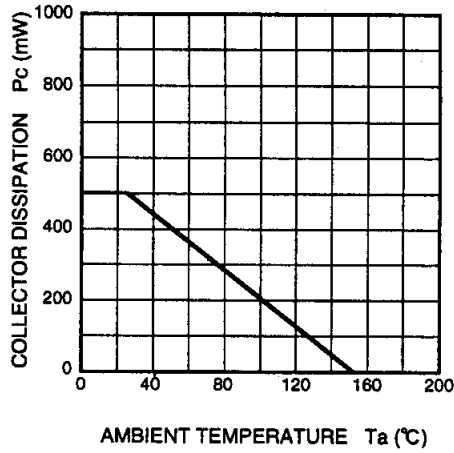
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C = -10 \mu A, I_E = 0$	-25			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E = -10 \mu A, I_C = 0$	-4			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C = -100 \mu A, R_{BE} = \infty$	-20			V
I_{CBO}	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
hFE *	DC forward current gain	$V_{CE} = -4V, I_C = -100mA$	150		800	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C = -500mA, I_B = -25mA$		-0.25	-0.5	V
f_T	Gain band width product	$V_{CE} = -6V, I_E = 10mA$		180		MHz

* : It shows hFE classification in right table.

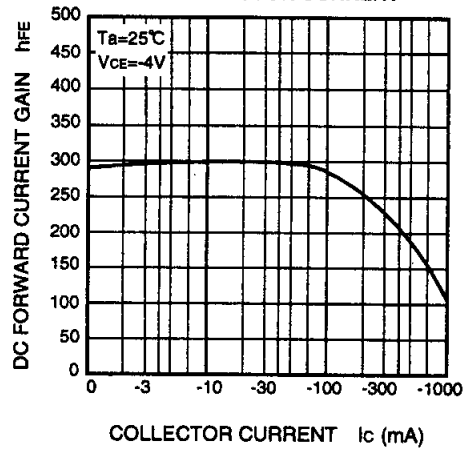
Marking	AAE	AAF	AAG
hFE	150 to 300	250 to 500	400 to 800

TYPICAL CHARACTERISTICS

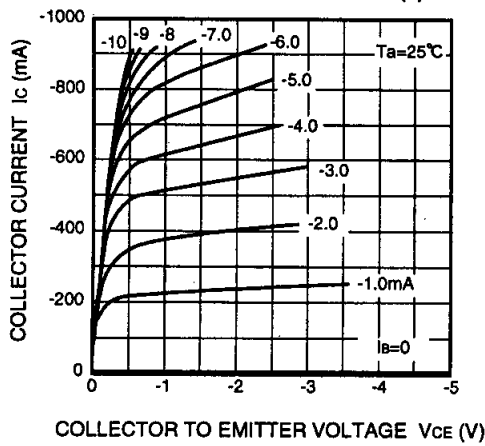
**COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE**



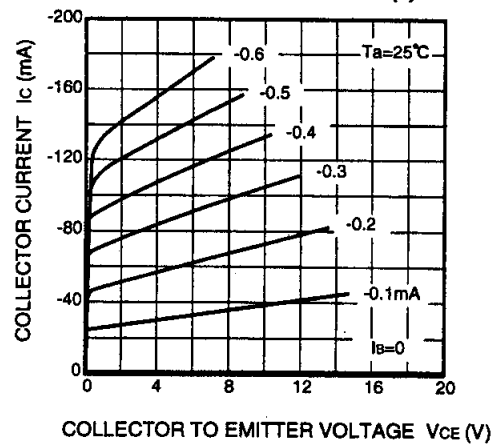
**DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT**



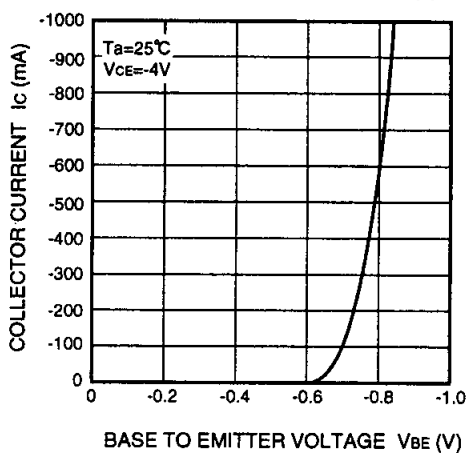
COMMON EMITTER OUTPUT(1)



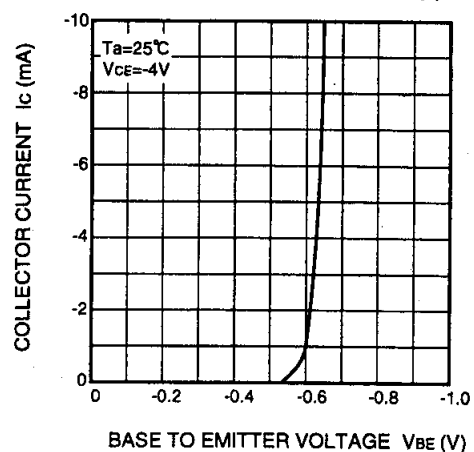
COMMON EMITTER OUTPUT(2)



COMMON EMITTER TRANSFER(1)



COMMON EMITTER TRANSFER(2)



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