

**FOR GENERAL-PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON PNP EPITAXIAL TYPE**

DESCRIPTION

2SA1945 is a resin sealed silicon PNP epitaxial type transistor. It is designed with high collector current and high voltage.

Complementary with 2SC5211.

FEATURE

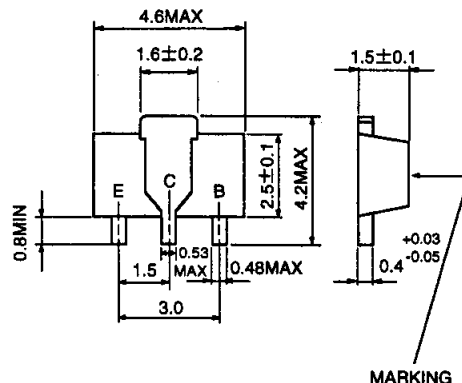
- High voltage $V_{CE0}=-50V$
- High f_t $f_t=150MHz$ typ
- Excellent linearity of DC forward current gain
- High collector current $I_{CM}=600mA$
- Small package for mounting

APPLICATION

For switching, small motor drive application.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

E : EMITTER
C : COLLECTOR
B : BASE

EIAJ : SC-62
JEDEC : -

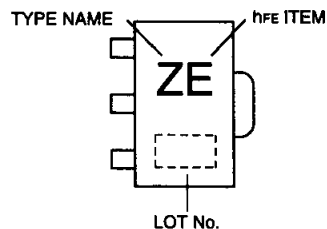
Note)

The dimension without tolerance represent central value.

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

Symbol	Parameter	Ratings	Unit
V_{CB0}	Collector to Base voltage	-55	V
V_{EB0}	Emitter to Base voltage	-4	V
V_{CE0}	Collector to Emitter voltage	-50	V
I_{CM}	Peak collector current	-600	mA
I_C	Collector current	-400	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 ($T_a=25^{\circ}C$)

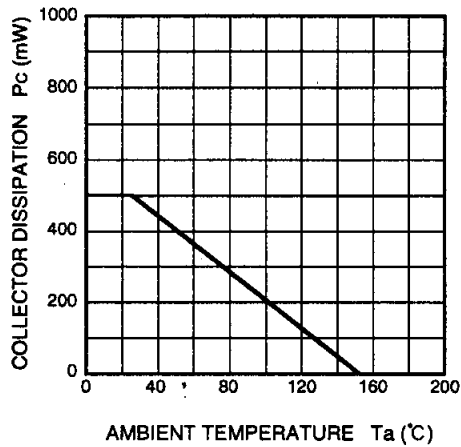
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=-10 \mu A, I_E=0$	-55			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=-10 \mu A, I_C=0$	-4			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=-100 \mu A, R_{BE}=\infty$	-50			V
I_{CBO}	Collector 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	$V_{CE}=-4V, I_C=-100mA$	90		500	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=-200mA, I_B=-10mA$		-0.17	-0.5	V
f_t	Gain band width product	$V_{CE}=-6V, I_E=-10mA$		150		MHz

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

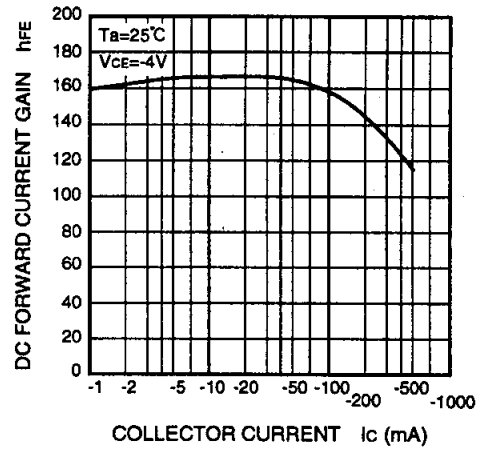
Marking	ZD	ZE	ZF
h_{FE}	90 to 180	150 to 300	250 to 500

TYPICAL CHARACTERISTICS

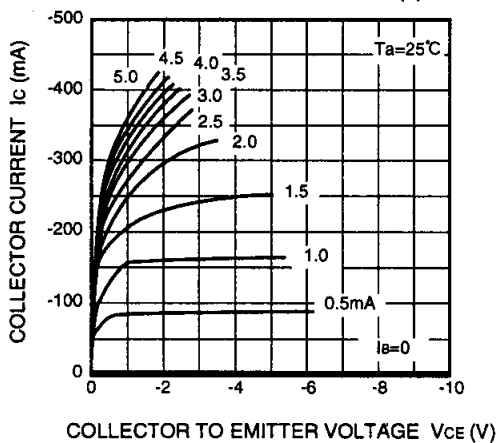
**COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE**



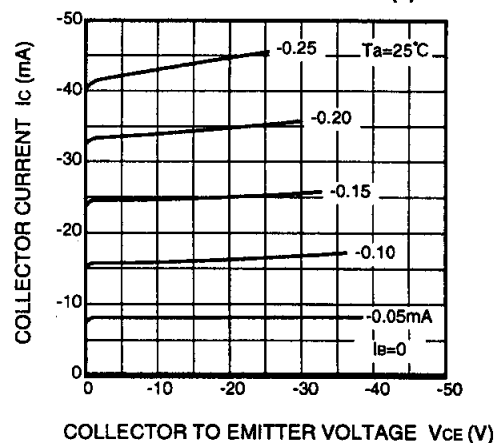
**DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT**



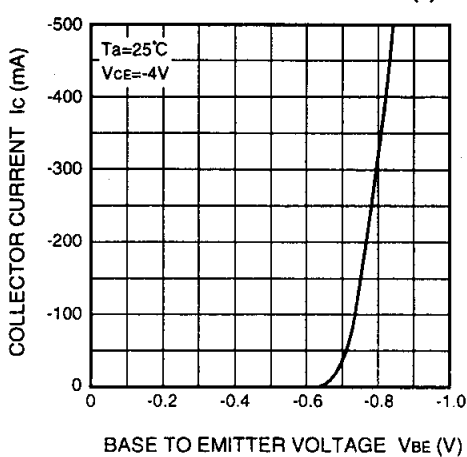
COMMON EMITTER OUTPUT(1)



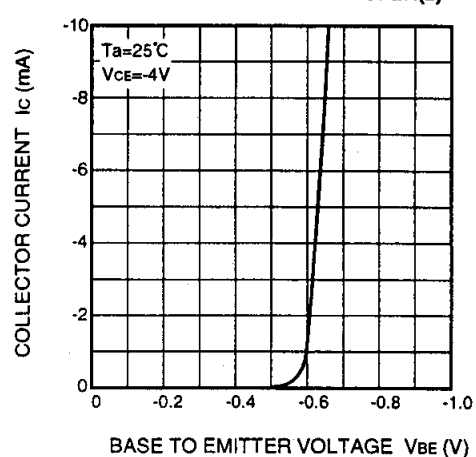
COMMON EMITTER OUTPUT(2)



COMMON EMITTER TRANSFER(1)



COMMON EMITTER TRANSFER(2)





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