

<Transistor>

# 2SA1998

For Low Frequency Power Amplify Application  
Silicon PNP Epitaxial Type Micro(Frame type)

## DESCRIPTION

2SA1998 is a silicon PNP epitaxial type transistor designed for small type motor drive, solenoid drive and power supply application.

## FEATURE

- High collector current  
I<sub>C</sub>=-2A
- Low collector saturation voltage  
V<sub>CE(sat)</sub>=-0.17V typ (@ I<sub>C</sub>=-1A, I<sub>B</sub>=-50mA)
- High h<sub>FE</sub>=150 to 800
- High collector dissipation  
P<sub>C</sub>= 600mW

## APPLICATION

VCR, deck, small type motor drive for player, power supply, etc

## MAXIMUM RATINGS (Ta=25°C)

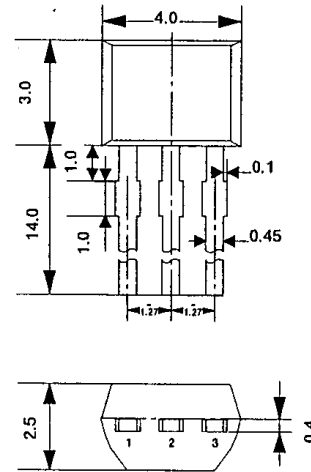
SYMBOL	PARAMETER	RATINGS	UNIT
V <sub>CB0</sub>	Collector to Base voltage	-20	V
V <sub>EB0</sub>	Emitter to base voltage	-6	V
V <sub>CE0</sub>	Collector to Emitter voltage	-20	V
I <sub>CM</sub>	Peak collector current	-3	A
I <sub>C</sub>	Collector current	-2	A
P <sub>C</sub>	Collector to Base voltage	600	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
V <sub>(BR)CBO</sub>	C to B break down voltage	I <sub>C</sub> =-10μA, I <sub>E</sub> =0	-20			V
V <sub>(BR)EBO</sub>	E to B break down voltage	I <sub>E</sub> =-10μA, I <sub>C</sub> =0	-6			V
V <sub>(BR)CEO</sub>	C to E break down voltage	I <sub>C</sub> =-2mA, R <sub>BE</sub> =∞	-20			V
I <sub>CBO</sub>	Collector cut off current	V <sub>CB</sub> =-16V, I <sub>E</sub> =0			-0.2	μA
I <sub>EBO</sub>	Emitter cut off current	V <sub>EB</sub> =-4V, I <sub>C</sub> =0			-0.2	μA
h <sub>FE</sub> *	DC forward current gain	V <sub>CE</sub> =-4V, I <sub>C</sub> =-100mA	150		500	—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =-1A, I <sub>B</sub> =-50mA		-0.17	-0.3	V
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =-2V, I <sub>E</sub> =10mA		80		MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		42		pF

OUTLINE DRAWING

UNIT:mm



TERMINAL CONNECTOR

- ① : EMITTER  
② : COLLECTOR  
③ : BASE
- EIAJ : —  
JEDEC : —

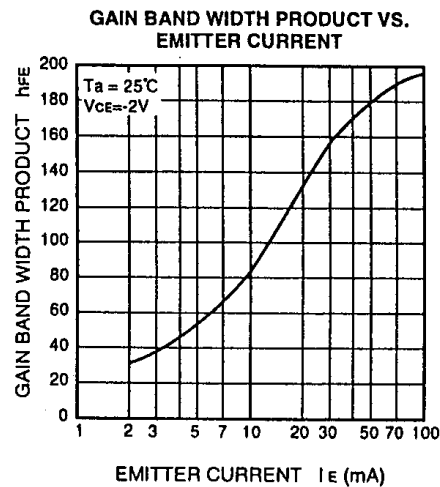
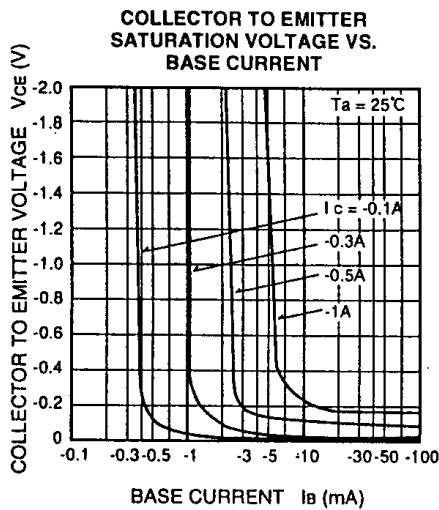
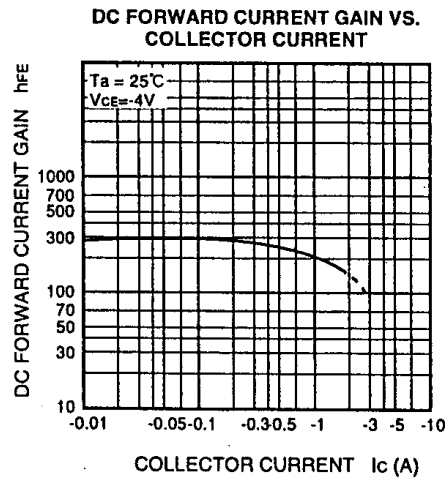
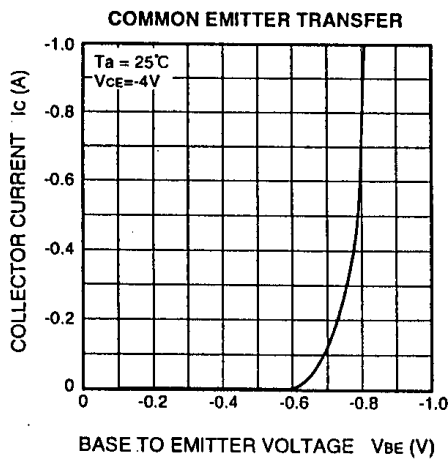
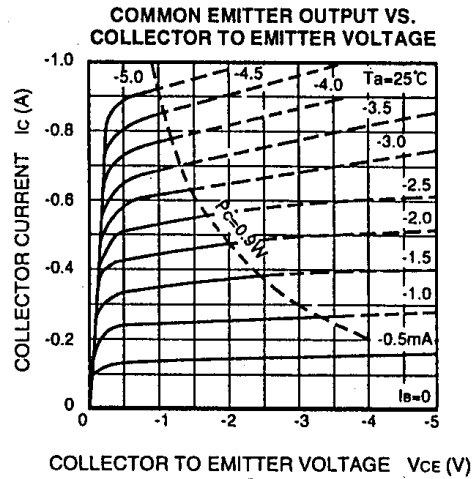
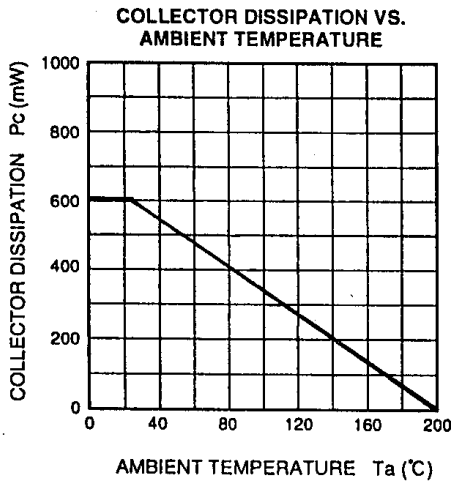
ITEM	E	F
h <sub>FE</sub>	150~300	250~500

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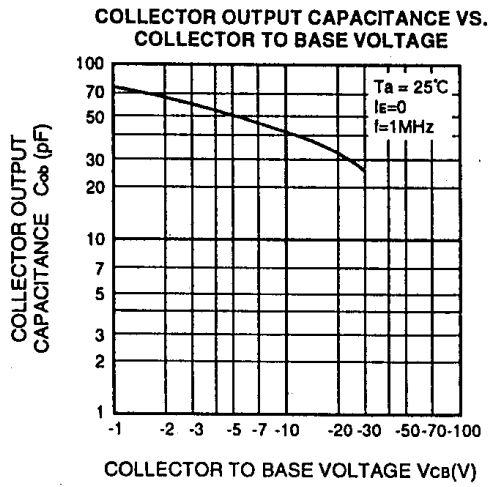
## TYPICAL CHARACTERISTICS



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