

# Power Transistor(80V,1A)

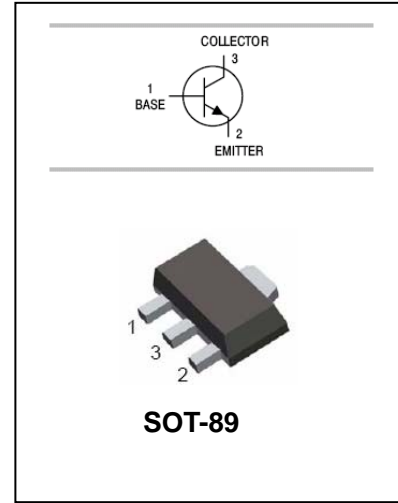
**2SD1898**

## FEATURES

- High  $V_{CEO}, V_{CEO}=80V$ .
- High  $I_C, I_C=1A(DC)$ .
- Good  $H_{FE}$  Linearity.
- Low  $V_{CE(sat)}$ .
- Complement the 2SB1260.

## APPLICATIONS

- NPN silicon transistor.



## ORDERING INFORMATION

Type No.	Marking	Package Code
2SD1898	DF	SOT-89

## MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	1	A
$I_C$	Collector Current -pulse	2	A
$P_C$	Collector Dissipation	0.5	W
		1.3 Note1	W
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	°C

Note1: Mounted on ceramic substrate(250mm<sup>2</sup>\*0.8t)



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**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=100V, I_E=0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=3V, I_C=0.5A$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=20mA$		0.15	0.4	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=-50mA, f=100MHz$		100		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		20		pF

**CLASSIFICATION OF  $h_{FE(1)}$**

Rank	P	Q	R
Range	82-180	120-270	180-390

**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

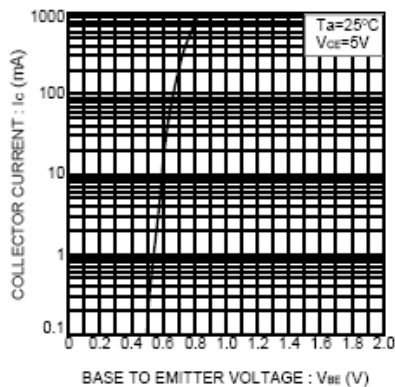


Fig.1 Grounded emitter propagation characteristics

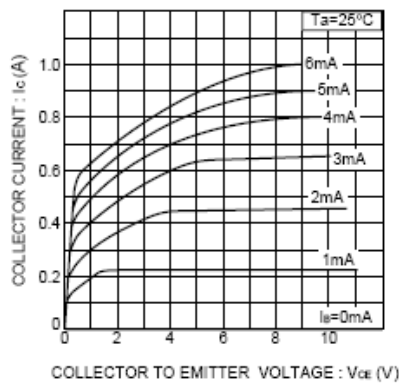


Fig.2 Grounded emitter output characteristics

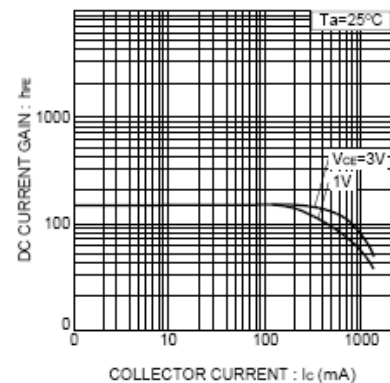


Fig.3 DC current gain vs. collector current

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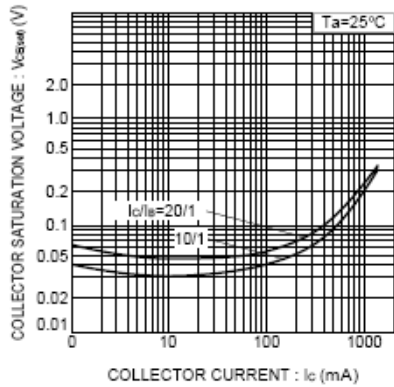


Fig.4 Collector-emitter saturation voltage vs. collector current

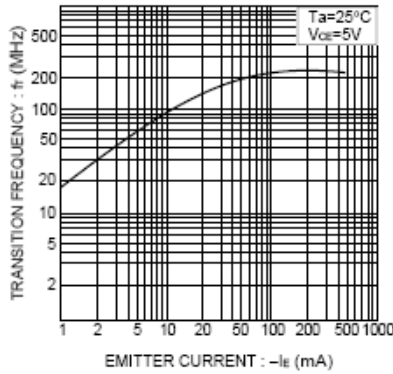


Fig.5 Gain bandwidth product vs. emitter current

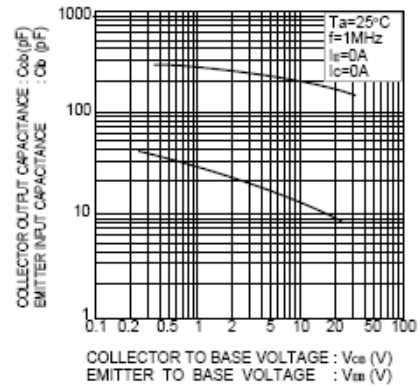


Fig.6 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

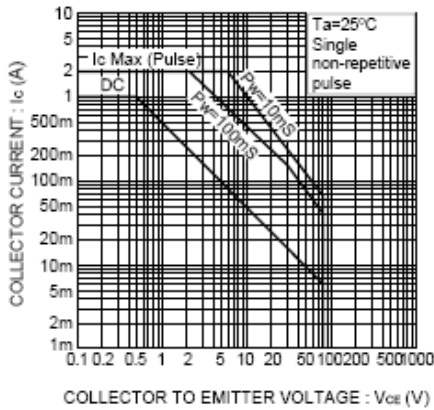


Fig.8 Safe operating area

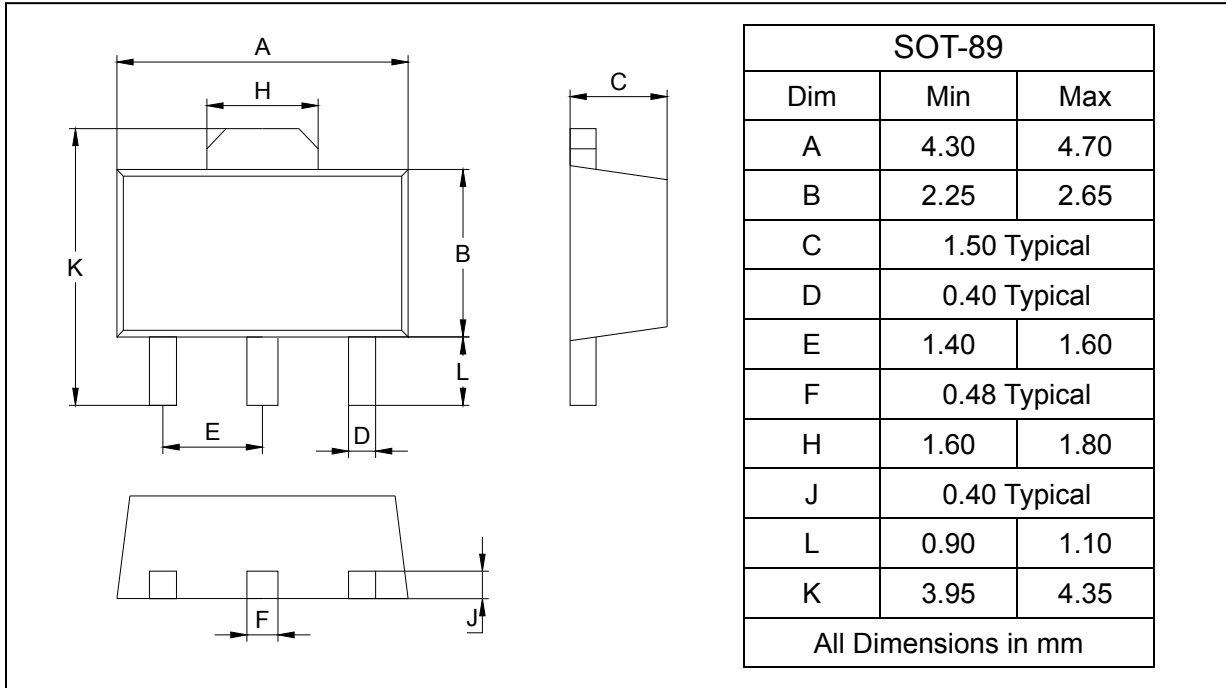
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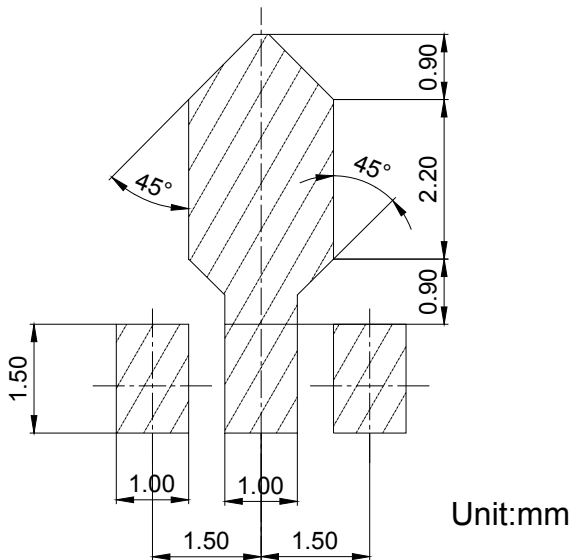
## PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



## SOLDERING FOOTPRINT



## PACKAGE INFORMATION

Device	Package	Shipping
2SD1898	SOT-89	1000/Tape&Reel