

## Silicon Epitaxial Planar Transistor

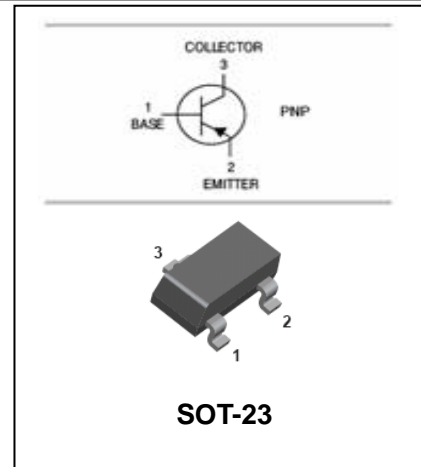
## 2SA1162

### FEATURES

- Low noise: NF=1dB(Typ), 10dB(Max).
- Complementary to 2SC2712.
- Small package.



Lead-free



**SOT-23**

### APPLICATIONS

- General purpose application.

### ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1162	SO/SY/SG	SOT-23

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

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	-50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-50	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-150	mA
P <sub>C</sub>	Collector Dissipation	150	mW
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55~125	°C

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

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Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = -6V, I_C = -2mA$	70		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$			-0.3	V
Transition frequency	$f_T$	$V_{CE} = -10V, I_C = -1mA$	80			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$			7	pF
Noise figure	NF	$V_{CE} = -6V, I_C = 0.1mA, f = 1MHz, R_g = 10k\Omega$			10	dB

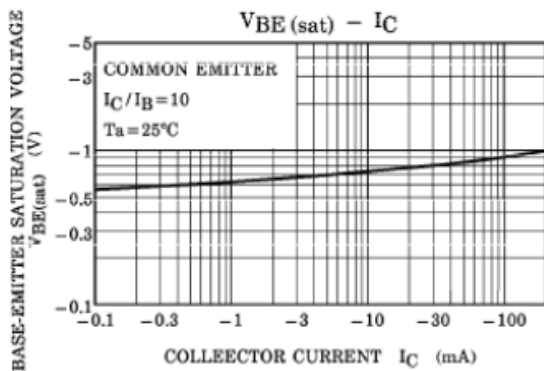
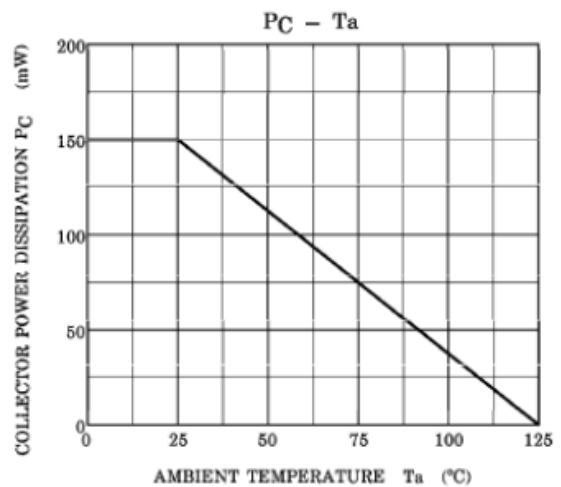
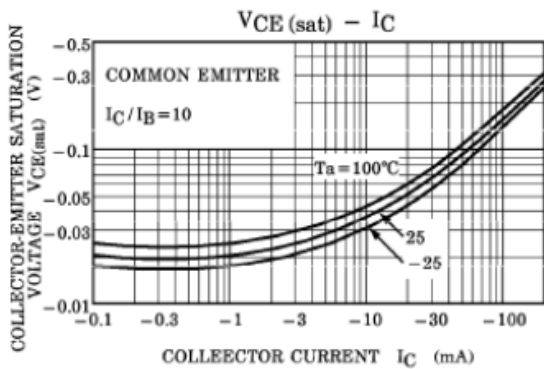
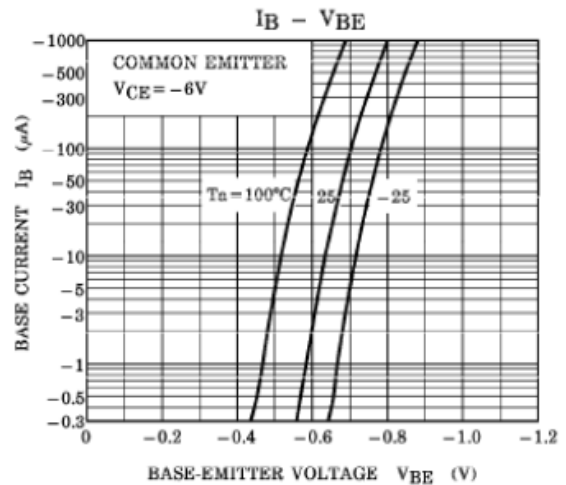
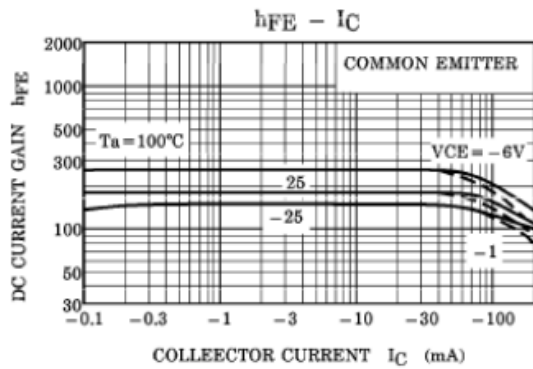
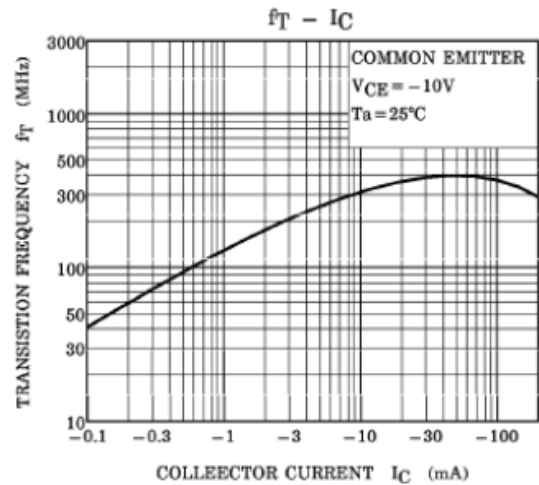
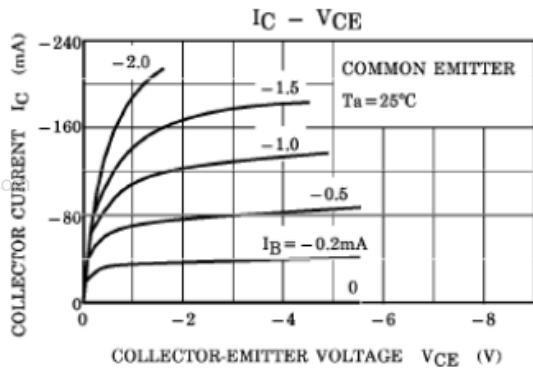
### CLASSIFICATION OF $h_{FE(1)}$

Rank	O	Y	G
Range	70-140	120-240	200-400

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TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



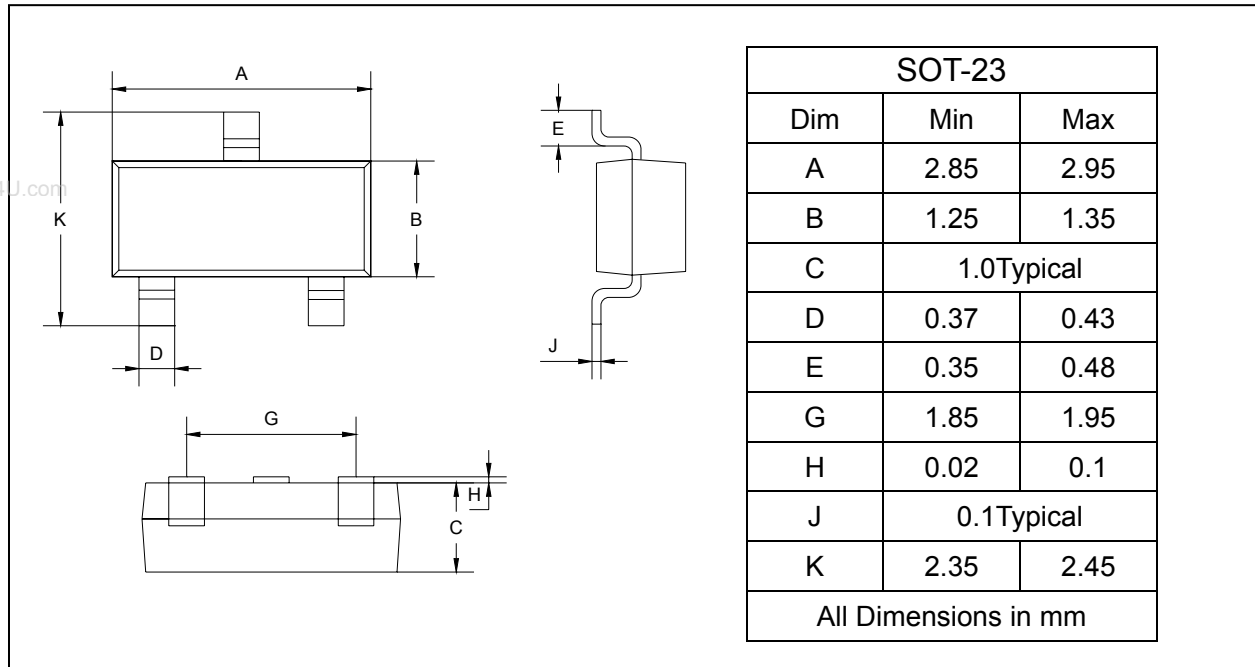
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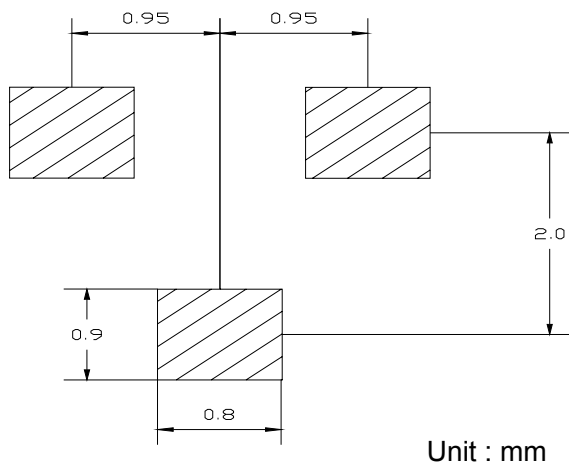
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
2SA1162	SOT-23	3000/Tape&Reel