

## PNP Silicon Epitaxial Planar Transistor

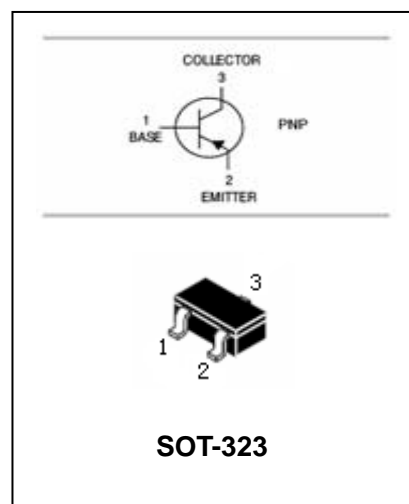
## 2SA1611

### FEATURES

- High voltage  $V_{CE0}=-50V$ .
- Excellent  $H_{FE}$  Linearity.
- High DC current gain :  $h_{FE}=200$  typ.
- Complementary to 2SC4177.



Lead-free



### APPLICATIONS

- Audio frequency general purpose amplifier applications.

### ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1611	M4/M5/M6/M7	SOT-323

### MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-100	mA
$P_C$	Collector Dissipation	150	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	$^{\circ}C$

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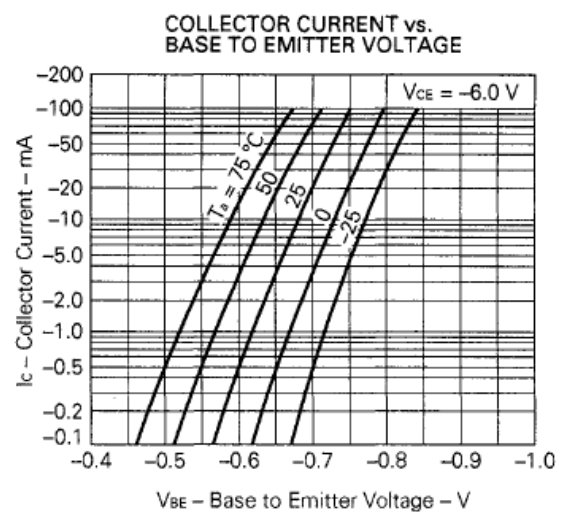
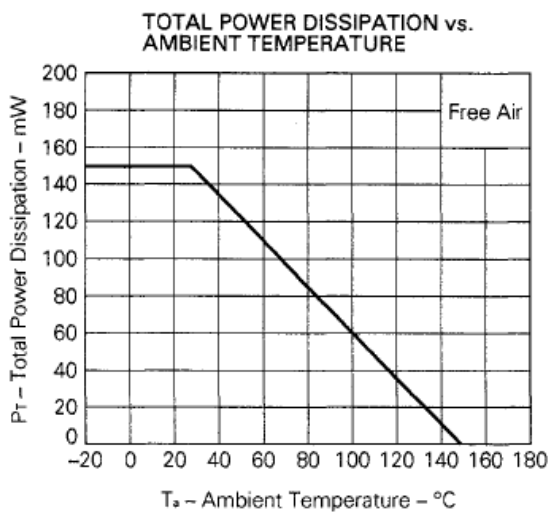
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-60			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	$I_{CBO}$	$V_{CB} = -60V, I_E = 0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = -6V, I_C = -1mA$	90	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$		-0.18	-0.3	V
Transition frequency	$f_T$	$V_{CE} = -6V, I_C = -10mA$	180			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		4.5		pF

### CLASSIFICATION OF $h_{FE}$

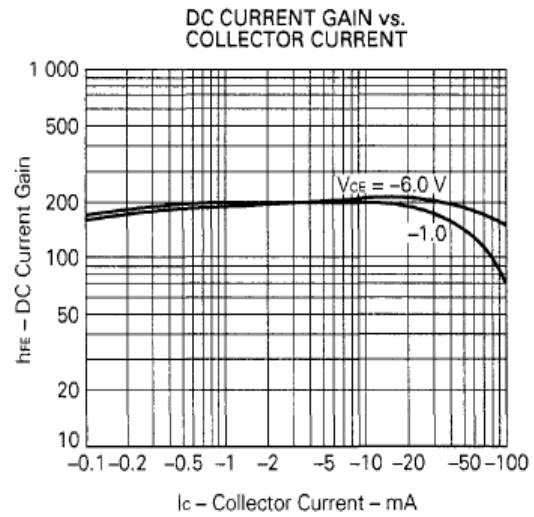
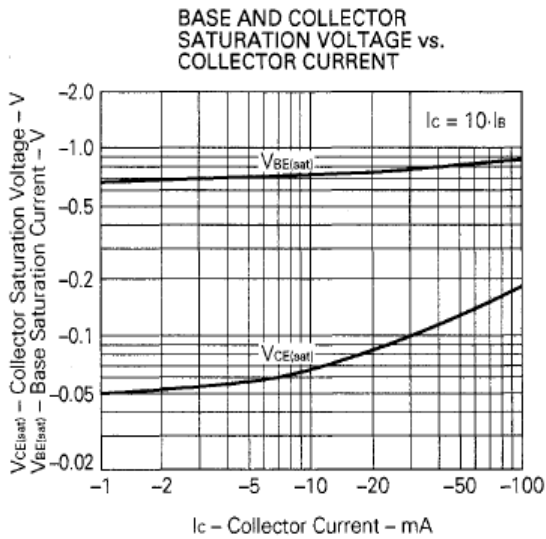
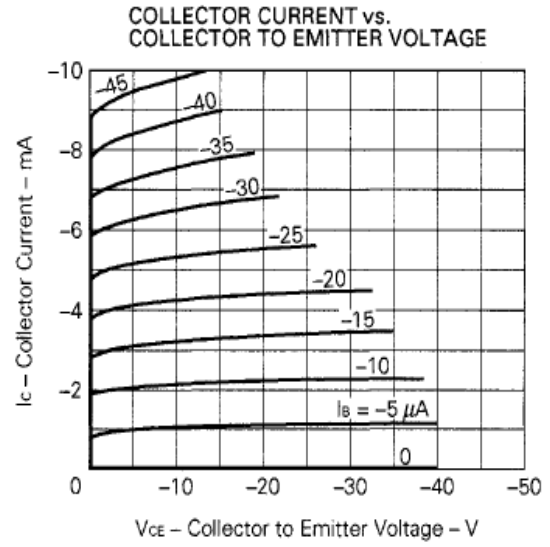
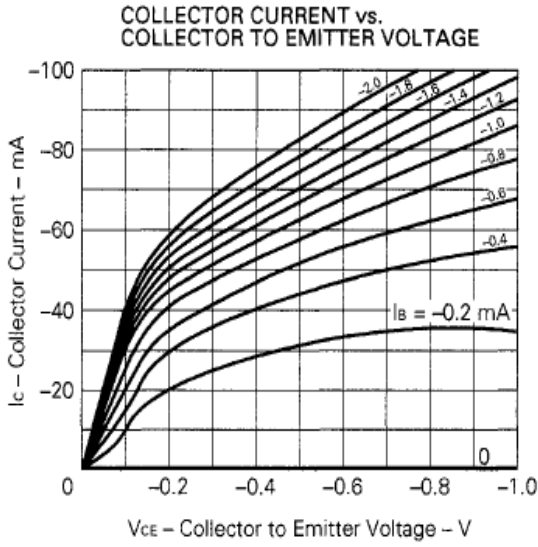
Range	90-180	135-270	200-400	300-600
marking	M4	M5	M6	M7

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



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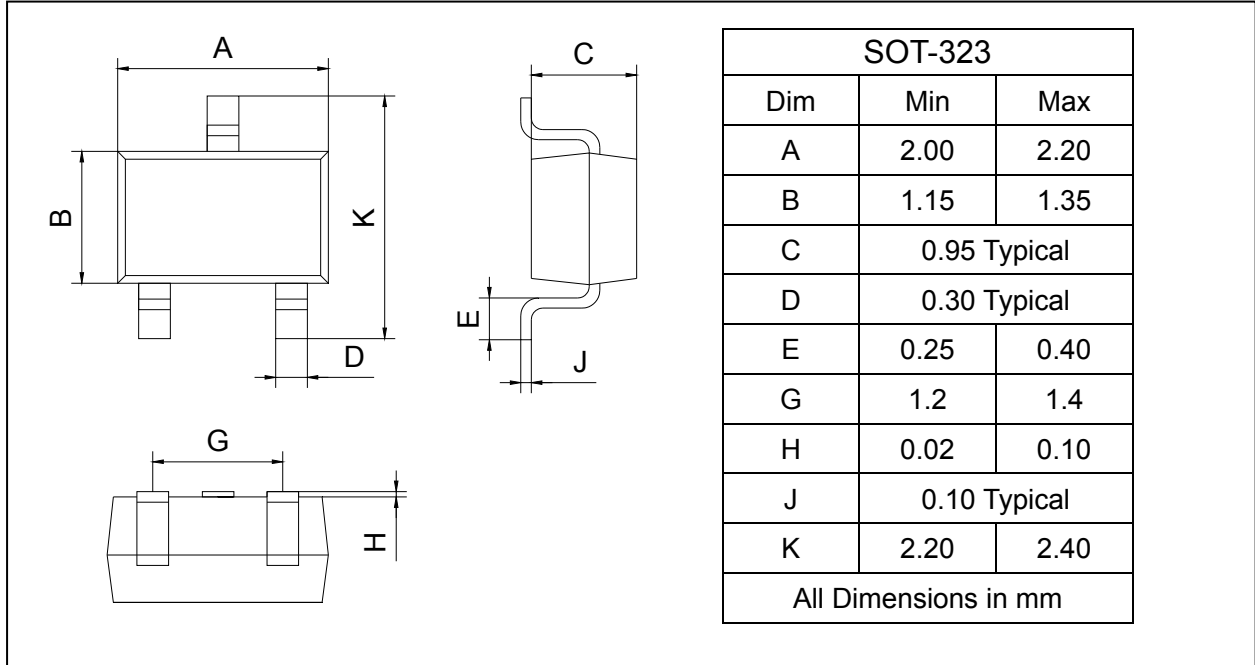
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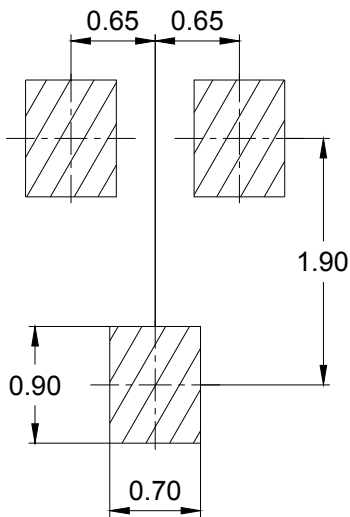
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SA1611	SOT-323	3000/Tape&Reel