



## Silicon Epitaxial Planar Transistor

## 2SD596

### FEATURES

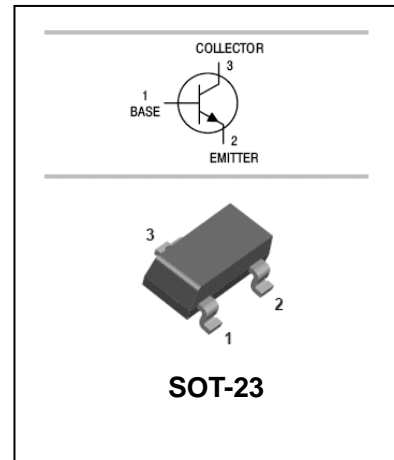
- Micro package
- Complementary to 2SB624 PNP Transistor
- High DC current gain  $h_{FE}$ :200TYP.( $V_{CE}=1.0V, I_C=100mA$ )



Lead-free

### APPLICATIONS

- Audio frequency general purpose amplifier applications



### ORDERING INFORMATION

Type No.	Marking	Package Code
2SD596	DV1/DV2/DV3/DV4/DV5	SOT-23

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	700	mA
$P_C$	Collector Dissipation	200	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	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=30V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=1V, I_C=100mA$ $V_{CE}=1V, I_C=700mA$	110 50	200	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=700mA, I_B=70mA$		0.22	0.6	V
Base to Emitter voltage	$V_{BE}$	$V_{CE}=6V, I_C=10mA$	600	640	700	mV
Transition frequency	$f_T$	$V_{CE}=6V, I_E=-10mA$		170		MHz
Output capacitance	$C_{ob}$	$V_{CB}=6V, I_E=0, f=10kHz$		12		pF

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

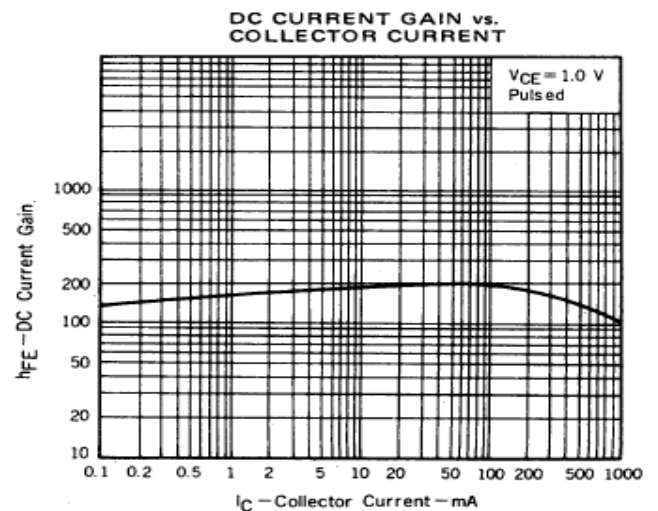
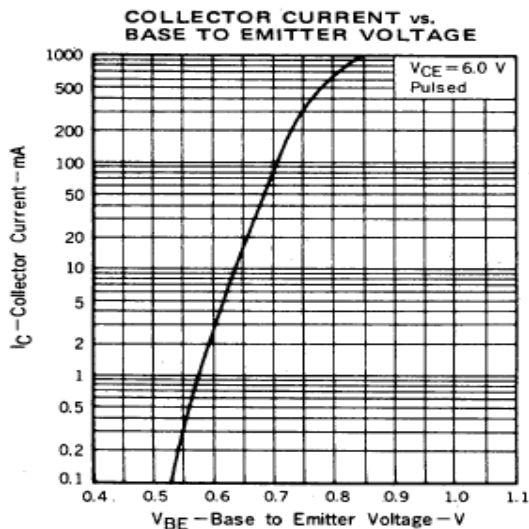
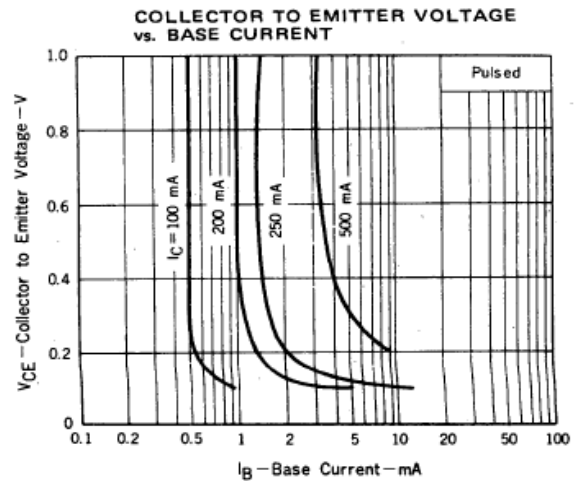
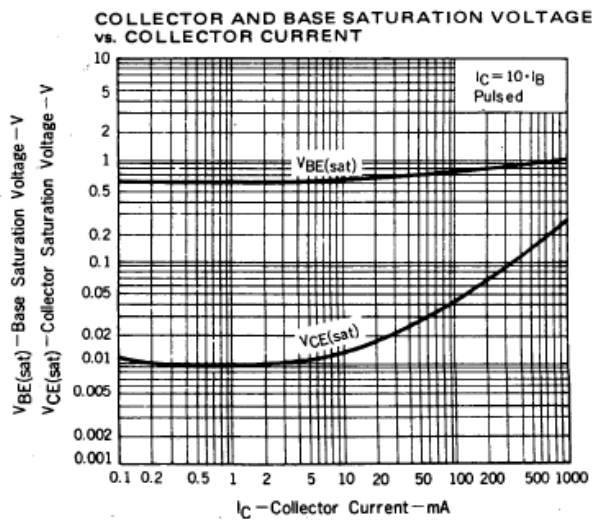
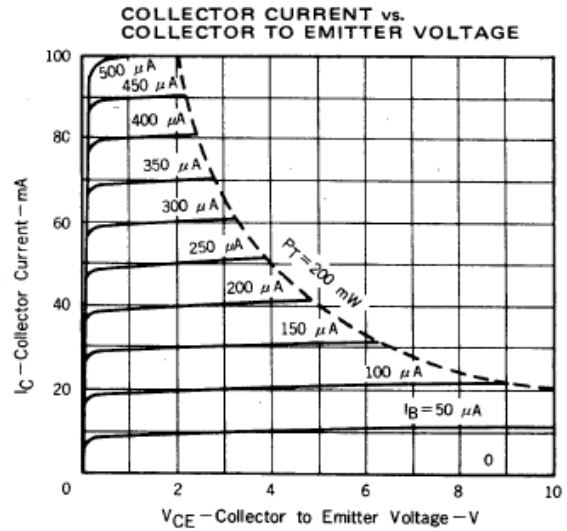
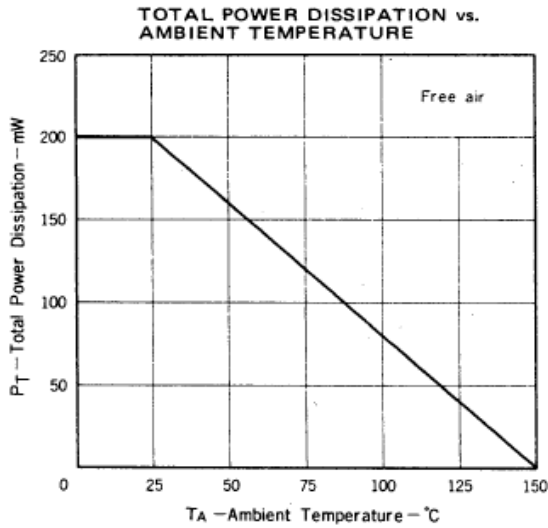
Range	110-180	135-220	170-270	200-320	250-400
Marking	DV1	DV2	DV3	DV4	DV5



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



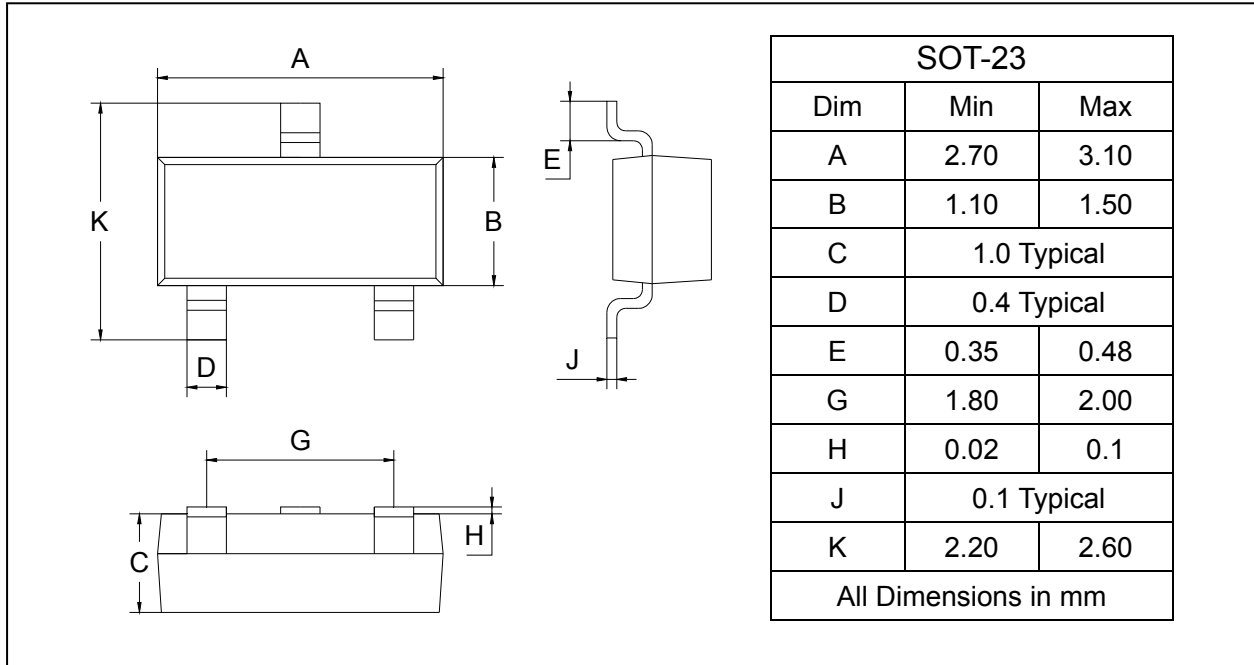
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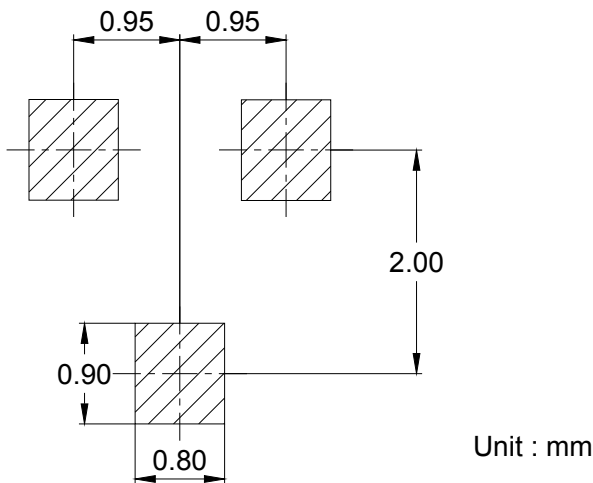
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-23



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

Device	Package	Shipping
2SD596	SOT-23	3000/Tape&Reel