

Silicon Epitaxial Planar Transistor

2SD596

FEATURES

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



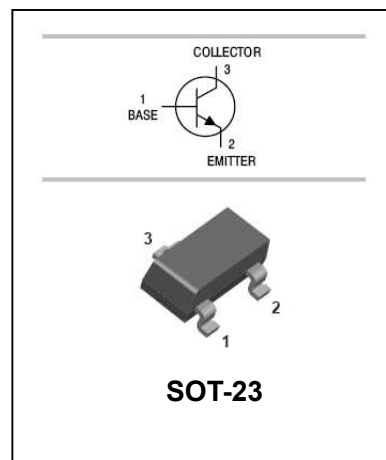
Lead-free

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	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
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

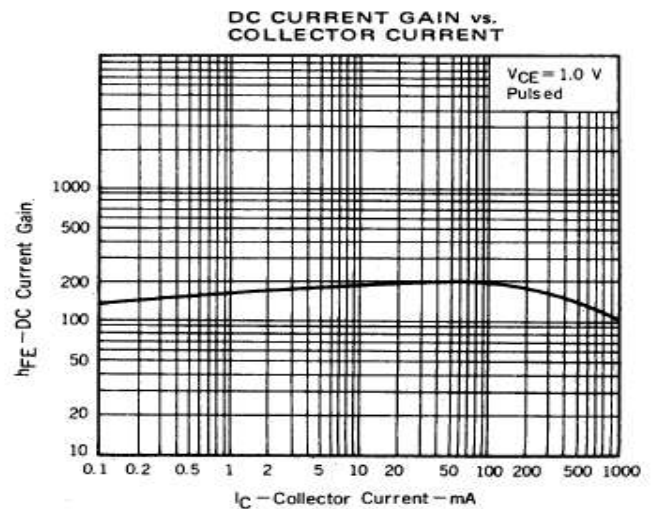
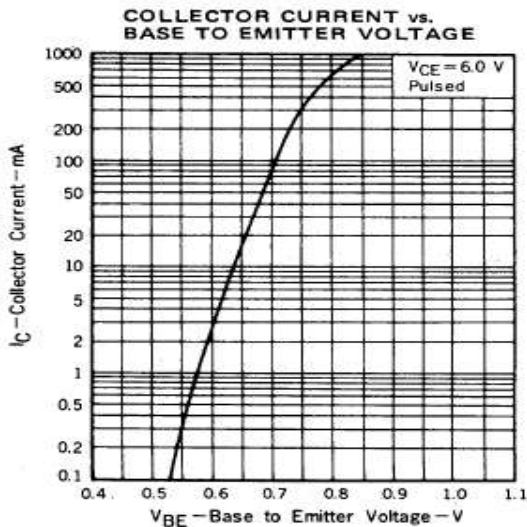
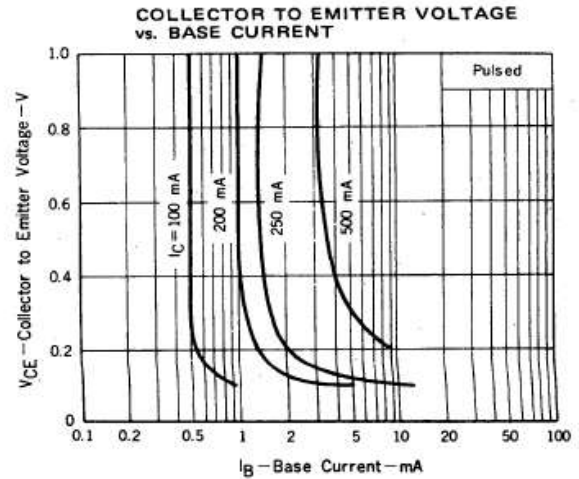
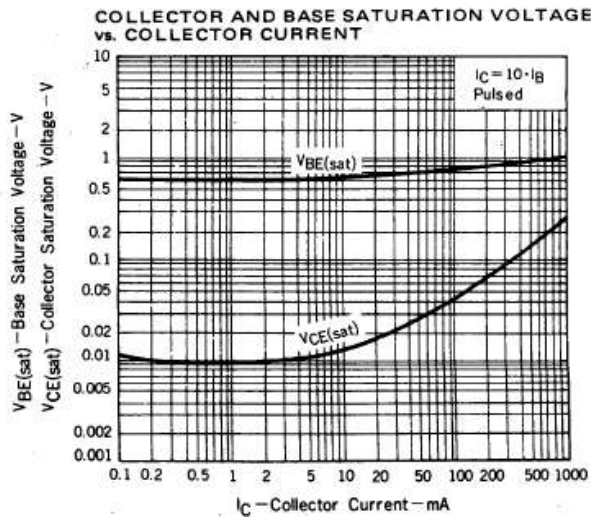
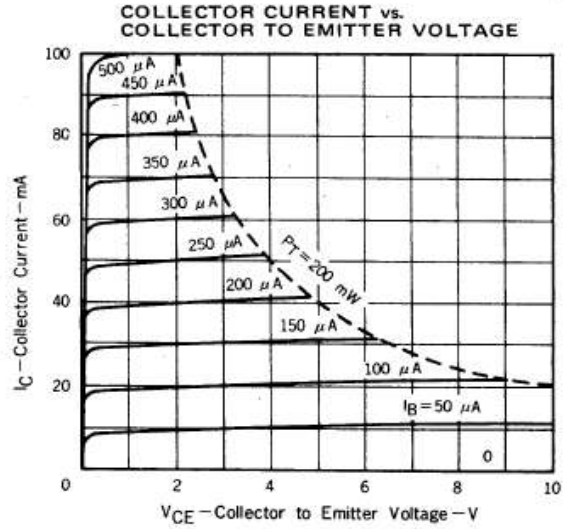
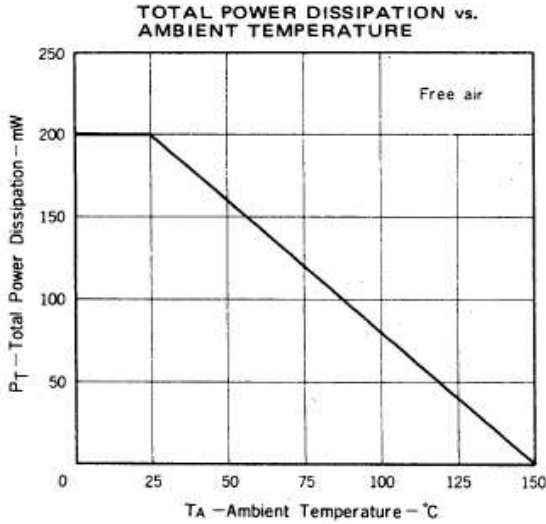
CLASSIFICATION OF $h_{FE(1)}$

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



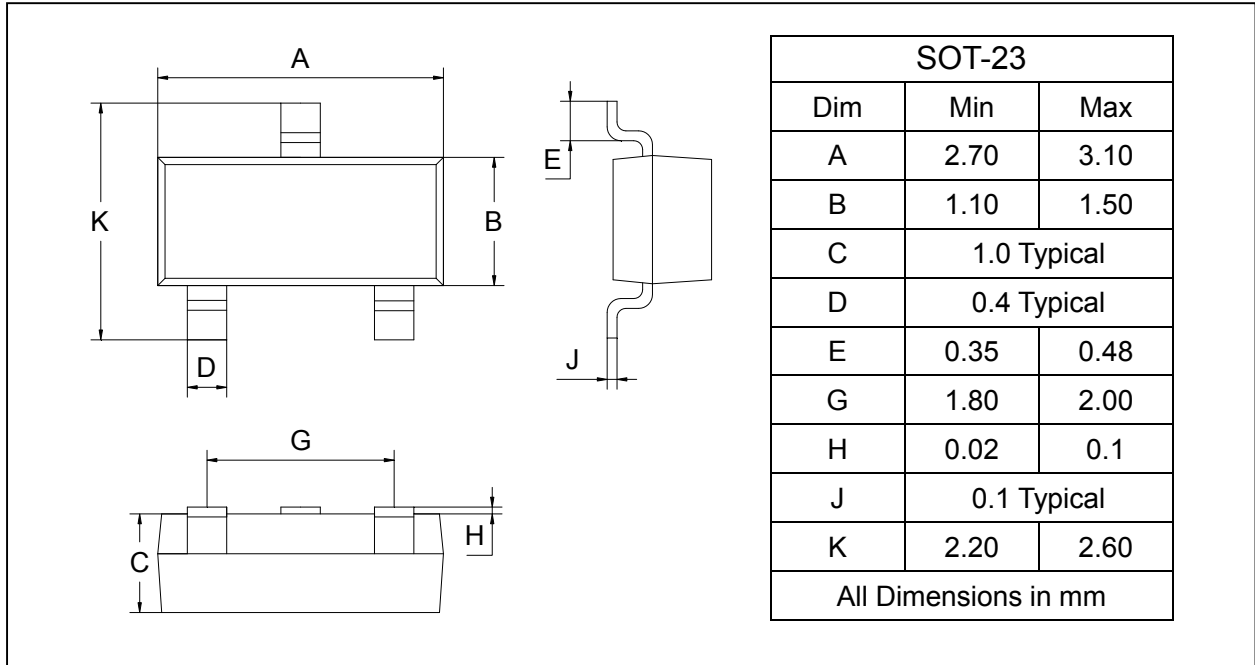
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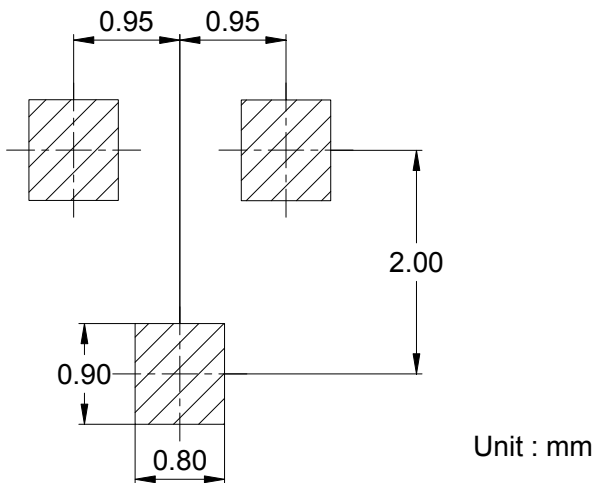
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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